

WEEK
AGO

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YEAR
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BUSINESS WEEK



For the Army from International Harvester—to man industry's first tank maintenance battalion (see "Labor").

BUSINESS
WEEK
EX

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Taking it easy in America can kill a soldier overseas

BE honest, now—aren't you and all of us spending time every day that we could and should spend in *work*? Taking it easy just 10 minutes a day by everyone in war work would cost America 1,250,000 hours of war production *every day*. A million and a quarter hours would build 10 big bombing planes or 3,500 automatic rifles.

Men may die on future battlefields if those 10 planes, those 3,500 rifles are not there.

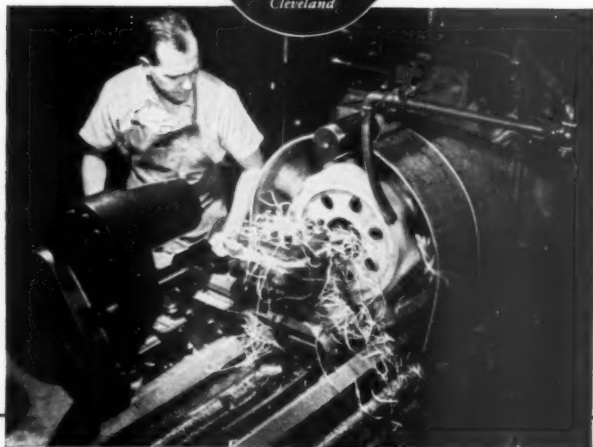
If we, on *production* lines, ease off ten minutes to wash up at the end of the shift, if we take it a bit easy at desk or machine—why shouldn't the soldier and sailor on *firing* lines? If we duck responsibility for winning this war, why shouldn't he? If we think of ourselves first—our money or power or rights—why shouldn't he?

But if he did, we'd call him a traitor to his country. There's only one test you and I dare apply to every question now. Not "What would I like?" but "*Will it help win the war?*"

WARNER
&
SWASEY

Turret Lathes

Cleveland



**YOU CAN BUILD IT BETTER, FASTER, FOR LESS...
WITH A WARNER & SWASEY**



Latest fashion for ocean cruises

A typical example of B. F. Goodrich development in rubber

BECAUSE of dive bombers, it's healthier for exposed gunners on ship decks to wear steel helmets. But for real protection a helmet has to fit—a standard helmet would ride up on a large head and expose the man's neck; on a small head it would interfere with vision. Also it's heavy (it must be big enough to cover ear phones) and in the excitement of action many men throw away anything uncomfortable.

Navy engineers believed a helmet could be made to fit any head size if some form of self-adjusting lining were developed. A light, foamy

sponge-rubber lining could be self-adjusting but open cells would absorb ocean spray, and so increase the weight and be uncomfortable.

B. F. Goodrich engineers had developed a method of coating anything with a soft film of rubber by a single dip in liquid rubber. (It is called the "Anode" process.) They made thick helmet linings of foam and covered them by this method. The rubber coating or cover keeps water out of the foam rubber beneath, and still leaves it pliable to adjust itself automatically to any head size. It protects the sponge rubber from hair and face oils—and

is a special compound not irritating to the skin.

Here is only one of many examples of how B. F. Goodrich peace-time research had products and processes ready to solve scores of the problems of war-time production. That research continues, working on war now, but also to have new improvements in industrial products ready by the time war is over. *The B. F. Goodrich Co., Industrial Products Division, Akron, O.*

B. F. Goodrich
FIRST IN RUBBER



*the autobiography of a war order
that was filled on time . . . VIA GRAYBAR*

I AM AN ORDER for 500 feet of 1,000,000 CM Cable. A Rochester, N. Y., contractor needed this cable immediately to help convert a plant to war work.

I CARRIED AN A-1-A PRIORITY, but you can't conduct current with priority papers . . . and there just wasn't any cable of these specifications available in the area.

★ ★ ★

BUT GRAYBAR-ROCHESTER didn't turn me down, or tuck me away in a future-delivery file, awaiting the arrival of a factory shipment. Before I'd been there an hour, the local GRAYBAR Manager was pleading my case over the phone.

★ ★ ★

CALLS WENT OUT to GRAYBAR warehouses at Buffalo . . . Pittsburgh . . . and half a dozen other likely cities. Finally, at Columbus, Ohio, the answer came to light. Here, cable to fill the order was on hand.

★ ★ ★

IMMEDIATE SHIPMENT was made that same night. The cable arrived in Rochester in time to avoid delay in the work of plant conversion.

Your own orders for electrical supplies to increase the efficiency of war plants, get the benefit of these same facilities when they go to one of GRAYBAR's local "mobilization points". GRAYBAR can help you conserve manpower, simplify purchasing, and speed up the delivery of critical needs. Why not make it a policy to take advantage of this "know-how"?

GraybaR

MOBILIZATION POINTS IN OVER 80 CITIES
Executive Offices: GRAYBAR BUILDING, NEW YORK, N. Y.

Bringing together more than 200 manufacturers . . . 20,000 customers



BUSINESS WEEK and The ANNALIST

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WASHINGTON BULLETIN

WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

Wages Jam Anti-Inflation Plan

The President's belated move to put more steam behind the Administration's stalled anti-inflation program doesn't promise much.

Roosevelt let the cat out of the bag beforehand when he said that he wouldn't freeze wages. That means wages will continue to go up with living costs, regardless of whatever machinery is adopted to "stabilize" them. The inevitable result is a progressive increase in the cost of living—slowed but not stopped by the continued attempt to control prices by fiat, by subsidizing higher costs, by various measures to drain off purchasing power.

And, of course, so long as farm prices are in any wise tied to parity—which is measured by the farmer's cost of living—they will continue upward.

● **Political Recriminations**—Congress is puzzled and dismayed by the President's apparent intention to throw this hot potato on the very eve of election campaigns of those members who are up for reelection this year. Congressmen can't see any sense in raising that old bugaboo, the cost of living as an issue, especially since the public hasn't shown active concern about it. They don't think it's good politics, no matter how much pressure has been put on Roosevelt by Leon Henderson and his buddies. They fear that a strong bill will lose them labor and farm votes. They argue that another weak bill will be worse than nothing.

The upshot may be a decision by F. D. R. to make some show of administrative action rather than go to Congress for new legislation.

Unions' Pay-Boost Strategy

The unions aren't taking it for granted that F. D. R. will protect wages against encroachment but are pushing their own program. A.F.L. and C.I.O. are in substantial agreement on a scheme—formally put forward this week by the A.F.L.—for payment of all future wage increases "in whole or in part" in special war bonds not cashable until after the war. (NWLB turned down this proposal in the Little Steel case.)

Theory is that this would leave the way open to wage increases by taking the inflationary curse off them, enabling labor to stake out a claim to a larger share of the postwar national income. For protection of labor's share of the limited wartime supply of goods, this program calls for a widespread system of rationing.

OPA vs. WPB on Wages

Washington is wondering whether the long-predicted clash between OPA and WPB (BW—May 16 '42, p. 5) hasn't shown up in the fiasco over stabilization of the West Coast aircraft labor situation.

For the sake of maximum production, WPB wants equalization of labor conditions in the plants—no matter what it costs—to avoid both labor pirating and decline in production that results from a series of individual disputes. It's worried, too, about the drift of labor from the plane plants to the higher-paid shipyards. Solution of the problem will almost certainly involve wage increases, up to the level of the highest-paid plane plant or even up closer to the level of the shipyards.

A flat declaration by an OPA spokesman that the price fixers wouldn't tolerate any wage increases broke up the recent conference in Los Angeles. Through its special price ceiling on military goods, the OPA has a substantial voice in the matter since any wage increases would have to be accompanied by higher aircraft prices.

● **Second Try**—The conference will reconvene soon, probably in Washington. Maybe OPA won't be represented.

Facts on Price Control

Whether you like Leon Henderson or not, take a look at these figures from the U. S. Bureau of Labor Statistics:

Retail prices of foods subject to OPA ceilings declined 1% from mid-May to mid-June; prices of foods not under price regulation rose an average of 4.8%. The rise in the uncontrolled group was sharp enough so that it pulled up the food costs of the family of moderate income by 1.3%—just about the same average rate of rise for the 14 months before application of the General Maximum Price Regulation on May 18.

Rubber—How Much, for Whom?

Rubber-stretching plan of Rubber Manufacturers Association is far from the motorists' salvation. The headlines have exaggerated R.M.A.'s intentions. It aims at providing inferior but usable tires during the next two years for 23,000,000 cars, most of which are now excluded from the rationing system.

The plan contemplates recapping of 30,291,000 tires, making 13,233,000 new tires, and releasing 4,660,000 existing tires now frozen. Raw material requirements include: 97,420 tons re-

claim (15% of capacity), 3,332 tons natural crude, 33,188 tons thiokol, and 32,475 tons "bathtub butyl" or flexon (inferior to regular butyl under contract to Rubber Reserve Co.).

Recaps and new tires would be of reclaim, thiokol or butyl, depending on relative availability and on ability of Dow Chemical Co. to produce thiokol and of Standard of New Jersey to produce flexon in anticipated quantities without cutting into strategic materials and scarce raw materials.

● **Catches in Program**—Finally, there's a question if WPB will release frozen tires, permit use of 3,332 tons crude for cementing recaps, and permit flexon and thiokol programs. Even if the program goes through, it will permit only 60% of 1941 motoring, and necessitate 40-mile maximum speeds, constant tire care, continued strict rationing, and denial of tires to careless drivers.

Why No Higgins Ships?

The Maritime Commission's abandonment of the Higgins shipyard project is merely a spectacular symptom of a condition now pretty general in war production. The country is overbuilt on capacity relative to material and manpower supply.

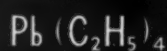
The shipbuilding program for which steel has been allotted calls for a 22,000,000-ton capacity next year, and the shipyard program was laid out on that basis. The yards, however, are proving more productive than expected. In the last month or two average keel-to-delivery time has dropped from 135 to 105 days; the best yards have got below 50 days and are talking about 30.

Including the Higgins yard, 1943 shipbuilding capacity is now estimated at about 25,000,000 tons. Elimination of Higgins' 2,000,000 tons cuts the program back down to size.

● **Competitive Problem**—The chance to protect vested interests in shipbuilding methods more conventional than those Higgins intended to use may have been welcome in some quarters (that's what he charges), but what marked the New Orleans yard for the ax is that it's the farthest from completion of any of the yards big enough to matter.

Boost for Cargo Planes

When the Higgins yard lost its shipbuilding contracts, it didn't mean that the productive capacity would be shifted over to giant cargo planes (although strong local pressure and Higgins's unquestioned ability make it certain that



Nobody knows how this works

...BUT IT DOES A TERRIFIC JOB!

IT HELPS airplanes fly faster, farther and higher. It gives greater power to automobiles, trucks, buses and motorized military equipment. It even helps the farmer's tractor plow more acres per gallon of fuel.

It's one of the ingredients of Ethyl fluid—shown as a chemist's model of a molecule, 100 million times life size. Ethyl fluid, which is made by the Ethyl Corporation, is used by petroleum refiners to improve the antiknock quality (octane number) of aviation and motor gasolines.

Nobody knows exactly why Ethyl fluid raises the antiknock quality of gasoline... how a single molecule like the one in the

picture can control the combustion of nearly 100,000 molecules of fuel and air inside an engine. But this fluid does such a good job that more than two hundred oil refiners put it into their gasoline—into superior fuels produced through modern refining methods.

The result is an adequate supply of high-octane gasoline—the key to many of the tremendous increases in power and efficiency that have been made in engines for airplanes, automobiles, tractors and military equipment.

ETHYL CORPORATION
Chrysler Building, New York City



there will be war contracts to replace the canceled job). A shipyard isn't notably convertible to aircraft. Moreover, the Higgins yard so far is hardly more than a ditch.

The Higgins-Kaiser proposal for great fleets of big planes to carry men, supplies, and matériel to places that ships now have trouble serving (because of distance, limited tonnage available, and submarines) has done one thing, however. It has precipitated a widely diffused impression that the time is ripe to expand the already fairly substantial air transport program into something phenomenally big—big enough to offer real relief to hard-pressed shipping capacity.

A Little Job for the Senate

Under the circumstances, House action on the 1942 tax bill doesn't mean much. Everyone in Washington is sure the Senate will take the "be it enacted" clause of the House bill and write its own program underneath. Knowing that, congressmen felt it was safe to make a political play in the House.

When the Ways and Means Committee reported its proposals, economists thought it would take real ingenuity to write a bill that would be less satisfactory. As things turned out, it took no ingenuity at all. It just took a little political maneuvering.

The House raised excess profits taxes to 90% and kept normal and surtaxes at 45%. This brought the total yield another \$100,000,000 or so closer to the Treasury goal without putting any additional load on voters. Representatives trust the Senate to thresh out the question of whether corporations can stay in business under the 45-and-90 rate structure.

• **Some Probable Concessions**—Senator George's Finance Committee is sure to rework the whole corporate tax program. Odds are it will provide some sort of postwar credit to bring the effective excess profits rate down to about 80%. Experts also predict that it will either cut the normal-and-surtax rate back to 40% or provide a set of relief provisions to ease the burden of a higher rate.

Soap Problems Snowball

Having been forced to roll back their prices to the Feb. 28 level, soap manufacturers are now prevented by OPA from charging the cost of the rollback to the ultimate consumer in the form of reduced quantity and quality; by the terms of this week's OPA order weight and quality of packaged soap, chips, powders, and cleaners are frozen at their mid-July levels. The order has

nothing to do with government-designed quality standards, for the soap people set their own standards in July. All Henderson wants is to see that they are scrupulously observed.

Relief for the soap manufacturers has already been provided by OPA in the form of a reduction in the price of inedible tallow. That leaves the fat renderers holding the bag unless they can get some sort of relief via a rollback or subsidy.



AIDE TO THE CHIEF

To help him carry on his biggest job today—as Commander in Chief of all U. S. forces—President Roosevelt this week chose Admiral William D. Leahy, onetime Chief of Naval Ordnance and until last month our Ambassador to unoccupied France, as his wartime "chief of staff." Asked what his new aide will do, the President replied: "I can be saved a great deal of time by having someone else do 'leg' work, index work, and summary work. At the same time, I must have somebody in whose judgment I have confidence."

Pricing Substitutes

The prominent role of inedible tallow in the soap highlights the fact war shortages are causing many a change in products, for imported oils are hard to get for soap manufacture these days (BW—May23'42,p45).

It's a tough problem for OPA to decide when a substitution merits a price revision. The answer hasn't been defi-

nately worked out, but here is the drift of current thinking:

Each case will have to be decided on its own merits. If the substitution does not result in a "new product," the ceiling price does not have to be changed, provided the substitute material does not lower the cost of production. If the cost of production goes up, and the product remains the same, an appeal can be made for an upward adjustment of price, but OPA will not relish handling such cases. A new product is one that is not of the same quality or does not render the same usefulness or service as the old product.

Movie Plan Under Fire

Somewhat surprisingly, the Department of Justice has turned balky over accepting the motion picture industry's "unity plan" (BW—Jun.20'42,p33). This is the marketing pact worked out by the Big Five producer-distributors and the majority of independent exhibitors as successor to the defunct consent decree.

The Department of Justice, it seems, doesn't like the idea of sanctioning "blind selling" (contract for films before they're made). That's implicit in the "unity plan" which calls for sales in blocks of up to twelve films, only five of which have to be completed at time of sale. The industry thought the D. of J. would slide over this angle because the independent exhibitors didn't squawk, but now all of a sudden Thurman Arnold is championing the idea that blind selling is a damper on quality.

What will happen now is anybody's guess. The movie industry can rewrite its "unity plan" and try again, it can wait for Arnold to make the next move, or everybody can stall along in a sort of legal-fog. The third is the case at the moment.

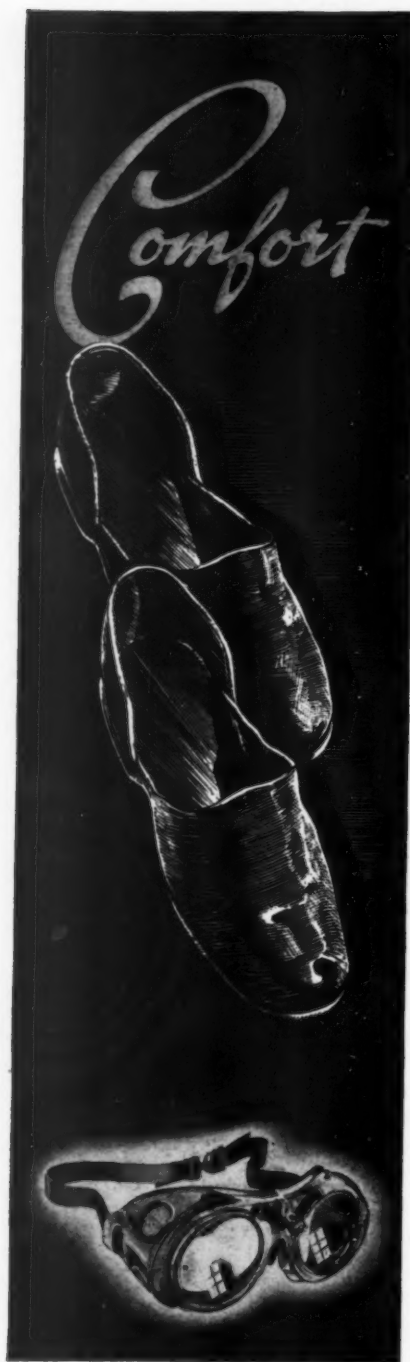
No Family Fights for NWLB

The National War Labor Board doesn't intend to take time out to settle union jurisdictional squabbles. These are too costly in wartime, the board is emphasizing.

Note this week's emphatic warning by Wayne L. Morse, one of NWLB's public members, that if the board has to settle these cases, look out for drastic action.

Both Phil Murray of the C.I.O. and William Green of A.F.L. were reminded of their obligation to settle such quarrels at home, without waiting for the government to step in.

Morse talked to the labor leaders over the heads of A.F.L. and C.I.O. unions which are quarreling about who



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On eye protective and respiratory problems consult your local Willson Safety Service Representative or write direct.

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DOUBLE
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READING, PA. U.S.A.

WASHINGTON BULLETIN (Continued)

is entitled to the work of remodeling a Frigidaire building at Dayton.

Plant Guards Join Up

The Army is busy organizing civilian guards at war plants into uniformed units commanded by Army commissioned or noncommissioned officers.

The guards remain on company payrolls. They are not inducted in the Army but will operate as auxiliary to the Army Corps of Military Police. In this capacity they will have the same relationship to the military police that deputy marshals have to federal courts.

The plant units will be trained with an eye to helping the Army resist attack on war material, war premises, or war utilities. Lt. Gen. Brehon B. Somervell, chief of the Army's Services of Supply, ordered the move following the scare over German saboteurs.

Army's Loan Officers

To expedite granting of credit to war subcontractors, the Army has placed officers in the 12 federal reserve banks. They have authority to guarantee commitments on the ground in amounts up to \$100,000. Most of the officers are bank officials specially commissioned for the purpose.

Officers also will be appointed to the reserve branch banks. This may save some tripping to Washington by would-be borrowers, as only the loans exceeding \$100,000 must clear the Fiscal Division of the Army's Services of Supply.

A presidential executive order last March authorized Army, Navy and Maritime Commission to share with banks the risks assumed in loans made to finance war production (page 93). The Army has set up a reserve fund and a schedule of fees charged borrowers for its guarantee.

Strings on Silver

The WPB order placing all silver imports under government regulation was just another evidence that the white metal is moving closer and closer to the strategic class. What the order actually means is that the authorities are edging toward outright allocation of industrial silver (as distinguished from monetary metal).

First people who will feel the effect of the import order will be those who have been in the habit of buying at the Treasury-supported "world price" of 35¢ an oz. Nonessential users presumably will have to buy in the domestic market, and there they will have to pay a premium over the Treasury's buying

price for monetary metal which is 71.1¢ an oz. To the average consumer, the main question is whether such trades as jewelry and flatware will get allocations of the 35¢ silver or whether they have to pay double that. If the latter, how will OPA price ceilings be affected?

Petrillo, Platters, and Arnold

James Petrillo and his 150,000 American Federation of Musicians members have started a merry legal chase with their new "make work" program. Petrillo has ruled that after July 31 none of his card-holders may work on phonograph records or transcriptions for public use—meaning jukebox fodder and the "platters" played by smaller radio stations.

The radio-and-record industry wants Thurman Arnold to jump on Petrillo and have his "make work" tactics declared illegal. The trouble is that Arnold and the Supreme Court haven't seen eye to eye on union matters in the past. Arnold can go to the court again, but it's a long shot and he knows it.

For his part, Petrillo hasn't endeared himself to press or public or to James Lawrence Fly, chairman of the Federal Communications Commission. If enough anti-Petrillo agitation goes on, it's possible that the radio industry (recently victorious over ASCAP, BW-Oct. 18 '41, p. 45) may risk a showdown with Petrillo. This would go beyond the question of "platters," would involve Petrillo's right to saddle the industry with so-and-so many live musicians.

Capital Gains (and Losses)

Look for antitrust action against A. & P. in September. The Department of Justice has its timetable laid out, but the site for the opening fireworks is still being debated.

Retail credit restrictions do not apply to the sale of coal either on instalments or by charge account.

U. S. Chamber of Commerce will not fill, at least for the duration, the \$40,000 salaried chairmanship of its executive committee. This will be vacated Oct. 1 by John W. O'Leary. Reorganization of the Chamber's operations is in the cards under its energetic new president, Eric A. Johnston.

At least one federal agency, harassed by draft inroads on key personnel, is investigating a scheme to have the Army commission important employees and then assign them to the agency.

—Business Week's
Washington Bureau

FIGURES OF THE WEEK

	§ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below)	*183.3	†182.7	181.5	167.4	161.4

PRODUCTION

Steel Ingot Operations (% of capacity)	98.7	99.1	98.0	95.0	96.0
Production of Automobiles and Trucks	17,870	22,980	23,225	75,625	109,912
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	\$39,239	\$39,683	\$42,128	\$17,699	\$34,156
Electric Power Output (million kilowatt-hours)	3,565	3,429	3,434	3,450	3,199
Crude Oil (daily average, 1,000 bbls.)	3,713	3,657	3,721	4,046	3,676
Bituminous Coal (daily average, 1,000 tons)	1,793	†1,808	1,888	1,842	1,611

TRADE

Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	79	80	79	76	86
All Other Carloadings (daily average, 1,000 cars)	64	63	60	47	60
Money in Circulation (Wednesday series, millions)	\$12,502	\$12,489	\$12,208	\$11,062	\$9,645
Department Store Sales (change from same week of preceding year)	+10%	†-2%	-3%	+32%	+19%
Business Failures (Dun & Bradstreet, number)	167	159	180	260	193

PRICES (Average for the week)

Spot Commodity Index (Moody's, Dec. 31, 1931 = 100)	231.4	233.0	229.4	223.5	208.7
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	154.8	155.3	154.1	152.5	143.6
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	182.0	183.4	180.3	176.9	149.5
†Finished Steel Composite (Steel, ton)	\$56.73	\$56.73	\$56.73	\$56.73	\$56.73
†Scrap Steel Composite (Iron Age, ton)	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
†Copper (electrolytic, Connecticut Valley, lb.)	12.000¢	12.000¢	12.000¢	12.000¢	12.071¢
Wheat (No. 2, hard winter, Kansas City, bu.)	\$1.07	\$1.08	\$1.14	\$1.26	\$0.97
†Sugar (raw, delivered New York, lb.)	3.74¢	3.74¢	3.74¢	3.74¢	3.49¢
Cotton (middling, ten designated markets, lb.)	19.34¢	19.87¢	19.00¢	18.91¢	15.93¢
†Wool Tops (New York, lb.)	\$1.250	\$1.244	\$1.191	\$1.279	\$1.268
†Rubber (ribbed smoked sheets, New York, lb.)	22.50¢	22.50¢	22.50¢	22.50¢	22.49¢

FINANCE

90 Stocks, Price Index (Standard & Poor's Corp.)	69.5	69.8	66.2	71.0	82.2
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's)	4.30%	4.30%	4.34%	4.28%	4.28%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's)	2.83%	2.83%	2.84%	2.83%	2.74%
U. S. Bond Yield (average of all taxable issues due or callable after twelve years)	2.34%	2.34%	2.32%	2.38%	2.14%
U. S. Treasury 3-to-5-year Note Yield (taxable)	1.20%	1.19%	1.17%	0.97%	0.68%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate)	‡-1%	‡-1%	‡-1%	‡-1%	‡%

BANKING (Millions of dollars)

Demand Deposits Adjusted, reporting member banks	25,822	25,654	26,058	24,169	24,260
Total Loans and Investments, reporting member banks	33,338	32,366	31,677	30,233	28,577
Commercial and Agricultural Loans, reporting member banks	6,481	6,456	6,546	6,728	5,988
Securities Loans, reporting member banks	1,023	867	838	925	952
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	19,110	18,313	17,364	15,259	14,506
Other Securities Held, reporting member banks	3,382	3,392	3,537	3,666	3,548
Excess Reserves, all member banks (Wednesday series)	2,070	2,320	2,791	3,561	5,336
Total Federal Reserve Credit Outstanding (Wednesday series)	3,227	3,069	2,803	2,390	2,294

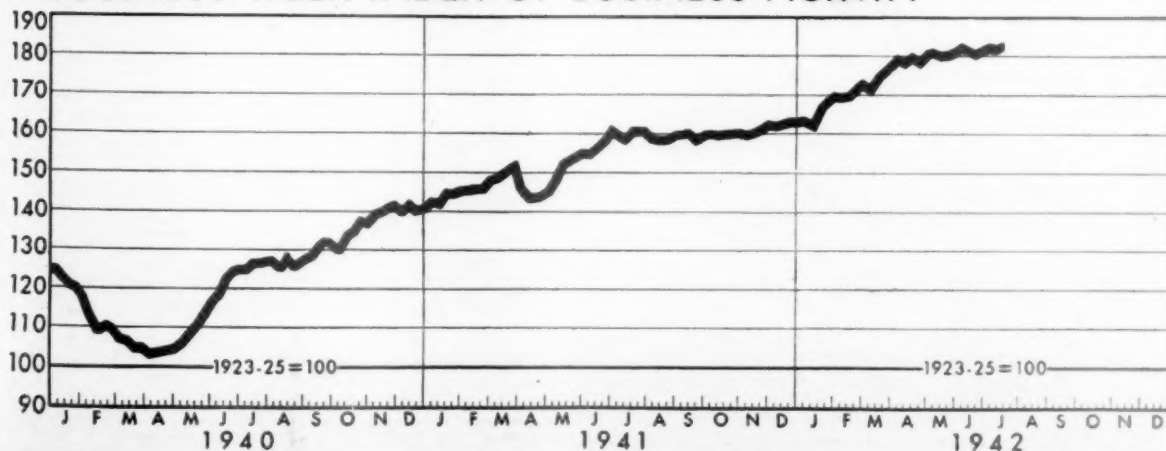
* Preliminary, week ended July 18th.

† Revised.

‡ Ceiling fixed by government.

§ Date for "Latest Week" on each series on request.

BUSINESS WEEK INDEX OF BUSINESS ACTIVITY



WEIGHED IN THE BALANCE

AND FOUND ADEQUATE



88,000,000 TONS
400,000,000 LBS

WHILE WE MEASURE STEEL IN TONS AND PLASTICS IN POUNDS, THE RIGHT UTILIZATION OF THE DISTINCTIVE, VERSATILE PROPERTIES OF PLASTICS ENSURES AN ADEQUATE SUPPLY FOR ALL WAR WORK. THE COMPLETE CHEMICAL, DESIGN AND ENGINEERING SERVICES REQUIRED FOR THE PROPER APPLICATION OF PLASTICS TO YOUR WORK ARE AVAILABLE AT ONE PLASTICS AVE. PITTSFIELD, MASS.

PLASTICS DEPARTMENT
GENERAL  ELECTRIC

FD-18

THE OUTLOOK

New Problems—New Controls

Changes on the price-wage stabilization front call for shifts in strategy. New twist in an old trouble on the line of production supply leads to quota-setting.

Intensified German attacks in Russia and Egypt, and Japanese moves in Manchukuo and China this week (page 60) portended another "climacteric" in the war later in the summer. But on the home front a crisis was passed, as (1) Congress voted \$120,000,000 for Office of Price Administration operations, thereby keeping OPA's organization intact; (2) farm bloc attempts to lift OPA control over foods and to prevent sale of feed wheat below corn parity were beaten off; and (3) the National War Labor Board pared a possible \$1 a day wage boost to Little Steel workers down to 44¢, at last tying wage rates to living costs (Outlook chart). Thus, at least the framework of price control has been preserved.

A New Spiral?

By no means has inflation been legislated away. Proof enough is the announcement this week that President Roosevelt will soon deliver another "cost of living" message to Congress.

Indeed, at first blush, the NWLB type "wage stabilization" would seem certain to touch off anew the classic inflation spiral. Wages push up industrial prices; so farm prices, related by "parity" to industrial prices, might be expected to rise and living costs to run higher—whereupon workers would be entitled to further raises, setting the whole process in motion again.

But the key to Henderson's formula for halting this spiral is the policy he stated recently to Congress: "We will not recognize as a basis for a price increase any (increased) wages that had not been negotiated before April 27.

Profits Share the Rap

In effect, this means that future advances in labor costs must come out of profits, or, as in steel, out of excess-profits-tax payments to the Treasury. Even if Henderson retreats from this policy in the case of consumer goods lines faced with bankruptcy, he will look to subsidy grants to absorb much of the wage raises.

If, finally, prices are forced up all along the line nevertheless, the increases theoretically will be smaller than the original wage boosts. Then, successive price lifts would be smaller and smaller—achieving, in the end, stabilization.

But the effect of this strategy is to shift pressure from the inflation spiral over to the inflation gap. For the Treasury's income from profits taxes would be cut, and its outlays on subsidies expanded. So, even if Henderson's delicately adjusted price-control mechanism works—which is still far from certain—additional controls will be called for. These will be needed to reduce the pressure of purchasing power on ceilings and to strengthen OPA enforcement against black markets.

Supplies Out of Line

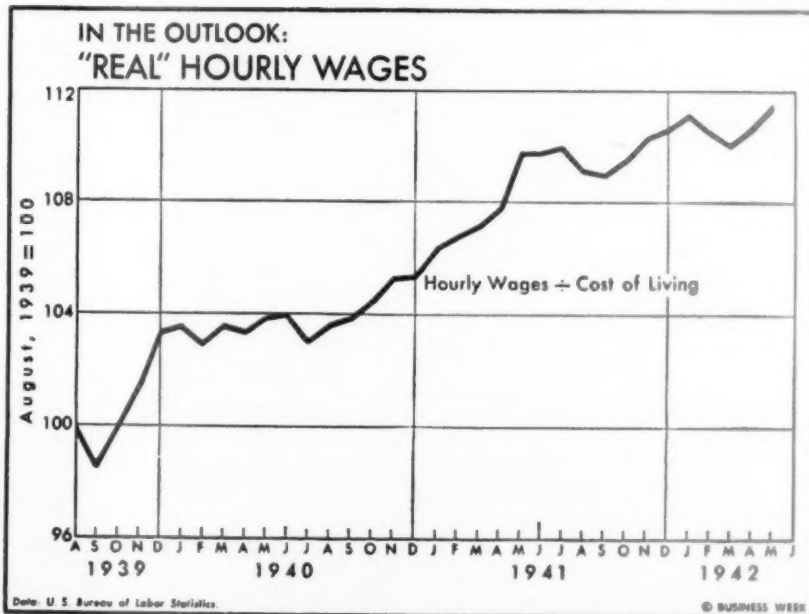
Production men, meanwhile, were getting more and more wrought up this week over an old problem with a new twist—materials (page 56). There is not

only a shortage in overall supply, which limits our total arms potential (BW—Jul.18'42,p13), but also a maldistribution of available materials among the various stages in the production process. More precisely, programs for production of parts have not always been well synchronized with each other and with assembly schedules.

Aircraft manufacturers have seriously curtailed assemblies below schedules because suppliers have not delivered sufficient radio, electrical and ignition equipment. Some ordnance makers are partly idle for lack of particular steels. And shortage of alloy steel has hit ring-gear output, causing truck plants working on Army orders to close.

Trouble-Shooting Needed

We have had particular equipment bottlenecks before—as, a few months ago, when merchant ships jammed up in outfitting basins awaiting propulsion equipment. So far, we have been able to make up the production deficits and get back to schedule once the bottlenecks were broken. But such delays in produc-



The National War Labor Board's new policy (page 80) is to maintain "real" hourly wages in individual industries—actual hourly earnings divided by the cost of living—at the Jan. 1, 1941, level. Since that date, living costs have risen 15%, and "real" earnings in such specific industries as steel have fallen below the NWLB standard. So there will be some further wage boosts. But the chart shows

that the over-all national average of "real" hourly wages in manufacturing is still actually above the year-and-a-half-ago base. That's because of the effect on the index of overtime payments, more jobs in high-wage work like shipbuilding, and sharp wage rises in some "substandard" lines. Now, with living costs stabilizing due to price ceilings, new NWLB boosts will carry "real" wages to record highs.



As Japan rushed troops across China this week to mass them on the border of Soviet-controlled Mongolia, increased its garrisons the entire length of the Manchukuo-Soviet frontier, and continued to consolidate its hold on Attu and Kiska in the American Aleutians with reinforcements estimated

at 25,000 men, Moscow watched nervously for an all-out Japanese attack on her vulnerable Pacific territory (page 60). Where Japan would strike first remained a mystery, but Soviet officials guessed the Nipponese would go after the tongue of Russian territory between Kharbarovsk and Vlad-

vostok from which Soviet bombers could ravage Japan's industrial centers at Osaka and Tokyo—barely 700 miles away. But if they struck simultaneously at Petropavlovsk, neither Moscow nor Washington would be surprised for this is the short supply route from the United States.

tion are obviously inefficient—wasting critical storage space, requiring overtime makeup work, etc. Worse, today's output may be worth twice tomorrow's—in terms of war value. And the real danger is that, as our output of finished arms doubles towards ultimate capacity, what now are merely delays may become irretrievable production losses.

The result is that control over production, all along the line, will have to be increased. Allocation of materials—even a flexible system, to meet departures of practice from theory—will not suffice. Typically, the War Production Board hereafter will assign steel producers regular quotas for plates, shapes, bars, alloys, sheets, and other specific semi-finished steel types—in order to insure that the materials it allocates are actually produced.

Into the Labor Reserves

Manpower shortages loom ever nearer (page 18). There are still 2,500,000 unemployed—in non-arms producing New York City (page 76), among minority groups like the Negroes, etc. Actually, we have already dipped into labor reserves not normally employed, mostly women. On how many additional such persons we can attract into the labor market depends how much our expanding labor demands will pinch war industry (most importantly), and also low-wage service and trade lines (most severely). Manpower specialists can't easily predict that influx—again, unexplored ground.

Deceptive Lull

Axis forces haven't moved spectacularly in last few days, but big drives are at hand. This calls for more U. S. supplies.

Dramatic developments are to be expected along the world's battle fronts during the next few weeks. The present lull—except for the bloody battles along the Don—will be broken by bold new moves forced on the Axis by the desperate need to push for a showdown this year, and forced on the United Nations if they are not to be driven out of the last strategic supply channels which bind them loosely together.

• **The Visible Signs**—Portents of what is ahead are beginning to show up.

The Japanese are massing troops along the frontiers of Mongolia, where, for more than 15 years, the Soviets have controlled the government and managed the economy of the 3,000,000 nomads who live in this vast region.

Further to the north and east, Japan—as anticipated (BW—Jun. 27 '42, p. 42)—is feverishly strengthening its foothold in the Aleutians.

• **Designs on Siberia**—Tokyo seems inevitably to be preparing for an attack on Soviet Siberia (page 60). When it comes, it will probably include an all-out thrust from China across Mongolia

and from Manchukuo into Siberia, aimed at cutting Moscow's supply lines to its Pacific provinces. Naval and air units, striking from home bases and from Japan's northernmost outpost at Paramoshiri, will try to grab Petropavlovsk and occupy the Kamchatka peninsula. And, operating from their new bases at Attu and Kiska, they will try to cut off the flow of American aid to the Russians.

India is in such a state of turmoil over its political relations with Britain that the United Nations will not be able to launch an effective back-door attack on Japan from there this year.

• **No MacArthur Offensive**—While the situation in Australia has apparently been stabilized for the present by the United Nations victories in the Coral Sea and at Midway, and by the arrival of considerable reinforcements from the United States, there is no evidence at all to back a popular belief that General MacArthur has either the men or the materials yet to stage a major attack against Japan from the south.

And in Siberia, the weather will soon be ideal for attack.

The rainy season which extends from May to early August will soon give way to long, clear autumn days which are perfect for air and ground operations. Out along the Kamchatka peninsula and in the Aleutians, the fogs will lift and Japanese air scouts will comb the skies for any sign of United States attack on their outposts, or of American aid for

Russia. Along the European and North African fronts there are also new signs of activity. While General Rommel has not been routed from his advanced position in Egypt—or even pushed back more than a few miles, there are signs of growing confidence in Alexandria. The United Nations apparently control the air, and Axis supply lines—both across the Mediterranean and along the exposed African road which clings to the Mediterranean shore—are being subjected to devastating bombing raids which must interfere seriously with plans for a new push on Alexandria and the Nile.

Fresh troops have arrived from Palestine and from South Africa, and supply losses at Tobruk have been covered with fresh convoy arrivals bringing tanks, munitions, and guns. Every day more planes arrive under their own power from Britain and the United States.

• **Any Second Front**—Despite optimistic rumors of a second front in western Europe this summer, there is no real basis for expecting this until next year. What may come is a series of big-scale commando raids reaching from Bordeaux to Trondheim and carried on with enough force to hold a strategic strip of coast for several days while important reconnaissance work is carried on and while friendly population are prepared to play their part in the ultimate full-scale invasion.

Business will realize more forcefully even than now the scope of its supply responsibility when the time comes for the United Nations to seize the initiative in this war, and when requirements change with the shifting pattern of war.

• **Some Shortcomings**—It is already plain that we shall not produce the 60,000 planes scheduled in 1942, though we may eventually end with a record 45,000. This adds to 1943's production burden for our war plans are geared to the higher figure.

Stupendous as our war output in other lines has been during the last ten months, we have barely started to roll out such second-front essentials as armor-piercing incendiary bullets, giant tanks, heavy guns, and dive bombers. And the warning this week (in an analysis published by *The Wall Street Journal*) that less than one-eighth of the munitions which the United States has produced within the last seven months has gone to the Russian, British, and Chinese armies indicates that we are still far from being the arsenal of the democracies.

• **1942 Delaying Actions**—We are still in the midst of the most critical months of this war. Every slowdown of the enemy that we can force—in Russia, Egypt, China, or the Aleutians—is important. But it is too early to read into the present strategic pause any indication that either Germany or Japan is exhausted. Both ends of the Axis still hold the initiative.

Concentrating Civilian Output

Nucleus plan, which leaves a few plants to carry on with regular lines while others convert to war production, looks like WPB's best bet in dealing with problem of nonwar goods.

WPB isn't going to tip off its hand, but look for a much wider extension of the nucleus plan in the next couple of months. There's going to be a great deal of concentration of civilian production in a few plants while others go to war.

• **On the Way**—Already the domestic cooking and above-the-floor heating industry has been forced into this type of segregated operation (BW—May 23 '42, p16), while the porcelain enamel hollow ware people know they're next on the list (BW—Jul. 11 '42, p8). A recruit for the near future is the farm machinery industry and there's a group of a dozen or more industries now being picked by a WPB steering committee.

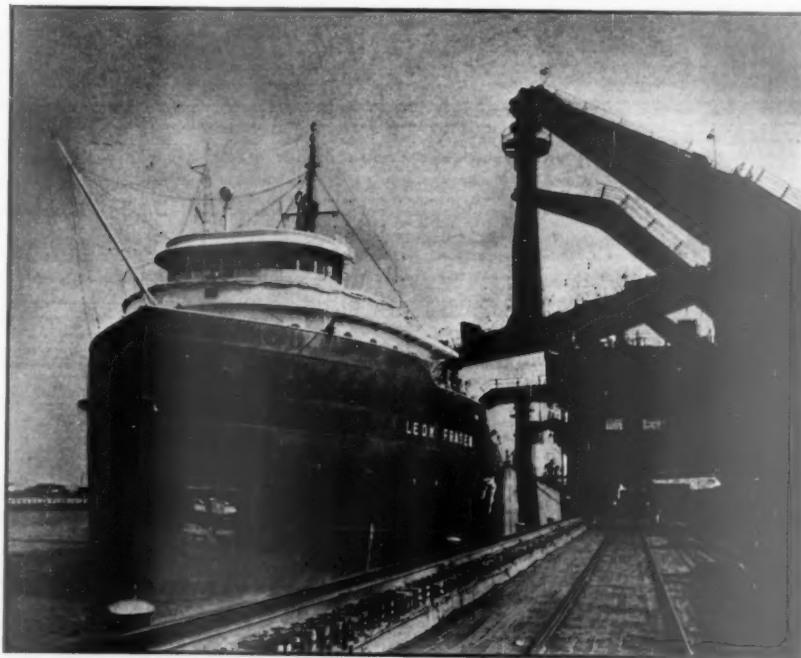
WPB's growing favor for the nucleus plan is largely due to the limited attractiveness of older methods. For instance, the "L" and "M" orders issued in the past did have the virtue of conserving critical materials, but they were woefully ineffective in beating the bushes for

hidden stockpiles and "working" inventories.

• **Wasteful Procedure**—Another disadvantage of the "L" and "M" procedures was their promotion of inefficiency by (1) cutting output too far, and (2) allowing wasteful plants to stay in business. And anyhow, not enough manpower was released for war work.

Side by side with the "L" and "M" idea, WPB tried another plan—complete stoppage of civilian production, such as was ordered in the case of the radio-phonograph industry. This solved the "L" and "M" shortcomings, but immediately created another problem: What will happen to civilian needs if the war is a long one?

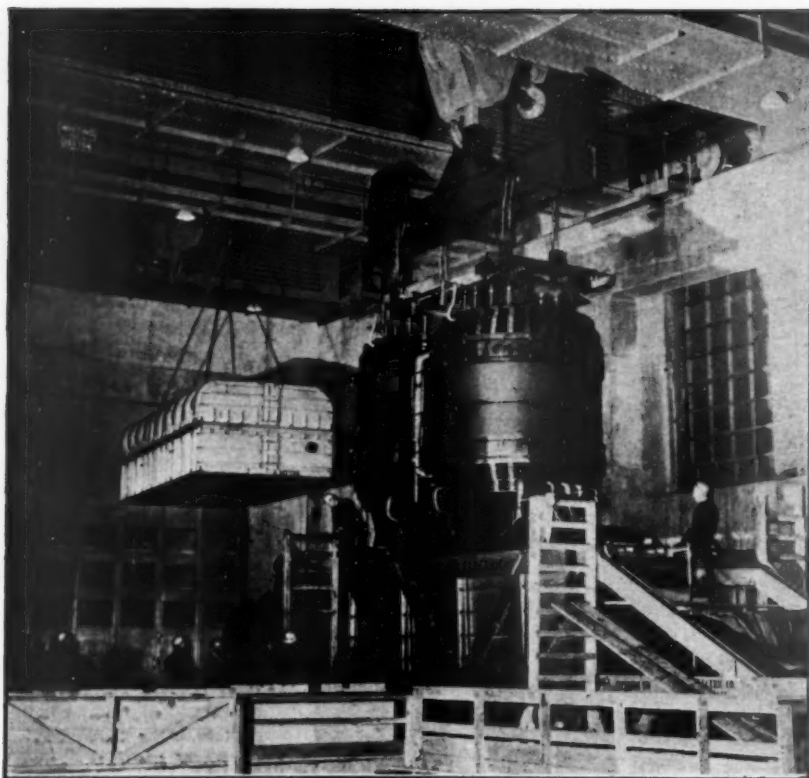
• **Possible Candidates**—Having examined these alternatives, WPB has come to the conclusion that in certain industries the nucleus plan has more favorable points and fewer drawbacks than any other. And while the "nucleus" list still remains a secret, conjecture (com-



FRASER'S RECORD

Early this month the S.S. Leon Fraser docked at Conneaut, Ohio, with the largest ore cargo ever carried on the Great Lakes—16,863 tons. Owned by the Pittsburgh Steamship Co., a U. S. Steel subsidiary, the Fraser is the newest in the fleet but will probably be

joined before the end of the season by four sister ships. This spring the urgent need of raw materials for the nation's arms plants prompted owners of ore-carrying fleets to open the shipping season earlier than ever before (BW—Mar. 21 '42, p17). As a result, ore carriers report increases in tonnage compared to year-ago figures.



HANDLED WITH CARE

To protect the equipment and insure its arrival in proper condition, the mighty cores and coils which are being installed at Grand Coulee Dam were shipped across the country from

a General Electric plant in a special freight car filled with inert gas. To maintain adequate pressure enroute, gas was fed into the sealed compartment by an attendant. To unload, the top (suspended at left) was lifted off the car.

combined with earlier WPB actions and statistics) would surely place the following industries on the roster of possible candidates:

Industry	No. of Establish- ments*	Aver. No. of Wage Earners*
Agricultural machinery (except tractors).....	317	27,800
Caskets, morticians' goods..	599	12,400
Cutlery, edge tools (exclusive of silver, aluminum, and plate)	266	15,400
Furniture (home and office)	2,597	160,900
Office and store machines..	123	36,200
Oil burners.....	130	1,500
Sanitary ware (enameled iron only) and plumbers' supplies (not including pipe)	259	24,600
Sporting goods (excluding guns)	350	13,800
Toys, games (except dolls and children's vehicles) ..	343	15,600

* Source: Census of Manufacturers, 1939.

• **How It Works Out**—As scheduled for the domestic cooking and heating industry, the nucleus plan calls for the concentration of civilian production in plants located in strictly nondefense areas with shipments of less than \$2,000,000 in the year ending June 30,

1941. The forceout of all other manufacturers, coupled with a production cut from 7,500,000 to 2,000,000 units per year, will save an estimated 350,000 tons of iron and steel, while pouring 25,000 workers into the manpower reservoir.

Furthermore, the remaining civilian producers (153 out of 245) must clip all frills off their merchandise. In the case of gas ranges, in fact, only a single number is permissible—a "stripped" item with four burners, no storage space or accessories, and not more than 100 lb. of metal.

• **Five Will Continue**—Similarly, when the enamel hollow ware makers have been sorted out, only five of the 17 producers will continue to supply civilians. The rest must join the war parade.

Manpower-saving—rather than metal-saving—is the clincher that endears the nucleus plan to WPB. But metal-saving, too, is no mean consideration, especially when the stockpiles and inventories of the manufacturers who must convert to war work are added to the heap. By way of subsidiary benefits, the WPB has its eye on the decreased use of power and transportation.

• **All Have Survived**—Although it may

be too early to mean much, not a single one of the 92 heater-cooker people whom the WPB pitched into the middle of the war stream has gone out of business. Despite many a plea that "we can only bend sheet metal and assemble parts," the manufacturers apparently continue to struggle in the belief that they'll be rescued by Army-Navy contracts.

Dealers are reporting that the new "stripped" models aren't any world-beaters when it comes to sales. When placed side by side with the pre-WPB glamour jobs, they look like ugly ducklings and are shunned by housewives. There's no cure for this situation, of course, until old inventory runs out and the housewife isn't distracted by the luxury of comparisons.

• **Merely Simplified**—By way of pertinent sidelight to this concentration of civilian production in a few hands, it's notable that OPA's Standards Section has played so small a role. In fact, the defrilled stoves aren't "standardized" at all—they're merely simplified.

Lack of standardization—that is, such-and-such qualities and such-and-such performance in relationship to price—is undoubtedly due to the fact that WPB is more interested in the war program than in supplying consumers with sure-fire merchandise. And this will probably be the procedure with the rest of the durable goods items slated for the nucleus plan. It would be difficult indeed, at this late date, to go into quality measurements.

• **A Quiet Divorce**—Contributing to this outlook is the fact that OPA's Standards Section at this moment is no longer an arm of the Consumer Division, but—after a quiet divorce—is floating around loose without any formal duties. The objectives once envisioned by such dyed-in-the-wool standardizers as Dr. Robert Brady (now resigned) have been lost in the shuffles that seem to be the perennial lot of the OPA.

OPA now wants to dispose of the Standards Section by hooking it up with the commodity branches. There it would have brighter prospects as an incubator for standardization and "victory models" in fields where competition still exists, and where lack of 100% government supervision makes hidden inflation possible.

• **For Example**—In such a field as textiles, the Standards Division would seek to prevent deterioration of quality, plus undue emphasis on the high-priced lines, by making standards mandatory or issuing a "victory model" to serve as yardstick for quality and price.

But that's still for the future. Right now Leon Henderson is too busy wrestling with Congress to have much time for standards, and WPB is too busy raking up manpower and steel to be finicky about the makings of a gas range so long as you can boil water on it.

Carriers on Spot

Arnold prepares gigantic antitrust action against rails, trucks, airlines, and assorted transportation agencies.

Out in Madison, Wis., Assistant Attorney General Thurman Arnold arose on Sunday, June 21, to make a speech in memory of the late Sen. Robert La Follette. Inspired by one of Fighting Bob's old crusades, Arnold soon turned his eulogy into a tirade against the common carriers, charging that they "controlled and manipulated the transportation of our nation—the greatest single element of cost in the distribution of goods.

"Monopoly control," he rasped on, "is still spreading over all forms of transportation," and he warned that unless the raids were stopped, "it may take 25 years to break the control which has been established when no one was looking."

Thurman Arnold always calls his shots. And now that his Madison remarks are permanently couched in \$180 worth of space in the Congressional Record, Arnold has officially served notice that one of the next victims in his black book is the transportation industry. With rate bureaus and trade associations already under investigation, it appears that the Antitrust Division is just about set to let loose its first batch of suits.

• **What the Charges Are**—The railroads head Arnold's list. Allowed by law to earn a certain return on the value of their rail property, the roads will apparently be accused of setting up rate bureaus and through them suggesting tariffs to the Interstate Commerce Commission that are based on inflated values. Furthermore, the Antitrust Division will almost certainly allege that such bureaus invariably are dominated by some major road that calls the tune to which its contemporaries dance.

Truck and bus lines, airlines, and miscellaneous carriers will be accused of using the property values of the railroads as a yardstick to boost their own tariffs above what they logically should be. The Department of Justice may also pursue its old beef that the truck lines, by a series of mergers, are attempting to substitute monopoly control for the present complicated competitive pattern. The airlines may also hear that in certain cities one operator tried to "freeze out" his competitor—or, by tacit conspiracy, split up the territory with him.

• **Labor on the Spot**—Finally, the brotherhoods are likely to get caught in the storm.

Arnold alleges that the labor unions

help their employers keep rates up and likewise keep competition down.

A series of "feeler" cases and interventions by the Antitrust Division in various cases before ICC and the Civil Aeronautics Board constitute a prelude to Arnold's big transportation show. These actions are:

Pullman Co.: After one postponement, antitrust case (BW—Jul.20'40, p17) has been heard in U. S. District Court for Eastern Pennsylvania; briefs are now being filed.

St. Louis Southwestern Railway: The Antitrust Division has intervened in a reorganization proceeding, now pending in the District Court for Eastern Missouri, charging that the defendant's parent (Southern Pacific) impaired earnings, thus bringing about the necessity for reorganization.

Freightways, Inc.: In an action pending in the District Court for Northern California, the division seeks dissolution of an alleged combination of truck lines operating west of Chicago (BW—Feb.14'42,p81).

Associated Transport, Inc.: In this action, the Antitrust Division finds itself aligned against the Interstate Commerce Commission which approved the merger of eight motor transportation companies into giant new company operating along Atlantic seaboard (BW—Mar.28'42,p73). When McLean Trucking Co. instituted legal action to compel abandonment of merger, Department of Justice sided with McLean.

ICC Applications: Arnold's division is closely watching a petition of the Allied Van Lines to unite some 600 household goods motor lines; a purchase application involving the Southwestern Greyhound Lines; an application of the Seaboard Air Line Railway to enter the motor carrier field; plus various applications pertaining to McLean Trucking, Consolidated Freightways, and Pacific Intermountain Express.

CAB Applications: Here the Antitrust Division has its eye on an application of the Railway Express Co. to approve contracts which company has with 22 domestic airlines to carry air freight and a complaint by the Pan American-Grace Lines (Panagra) that its affairs are being dominated by Pan American Airways.

Railway circles also report Antitrust Division investigations of the following: Illinois Freight Assn., Illinois Rate Committee, Ohio-Mississippi Valley Committee, Illinois-Indiana Coal and Coke Committee, Chicago Switching Committee, Central Freight Assn., Western Trunk Line Committee, Southern Ports Foreign Freight Committee, Transcontinental Freight Bureau, National Perishable Freight Committee, Central Freight Assn. Coal-Coke-Iron Ore Committee, Western Passenger Assn., Transcontinental Passenger Assn., Southwestern Freight Bureau, Southwestern Passenger Assn., New York Trunk Line Assn., New England Freight Assn., New England Passenger Assn., Southern Freight Assn., Pacific Freight Tariff Bureau, North Pacific Coast Freight Bureau.

Similarly, in the motor carrier field, the grapevine reports the following to be under investigation: Central States Motor Freight Bureau, Middlewest Motor Freight Bureau, Rocky Mountain Motor Freight Tariff Bureau, Middle Atlantic States Motor Rate Conference, Southern Motor Rate Conference, Northeastern Motor Rate Bureau, Southwestern Motor Tariff Bureau, Pacific Inland Tariff Bureau, Inter Mountain-Coast Motor Freight Tariff Bureau, Eastern Motor Freight Conference, Southwestern Motor Freight Bureau.

Best bet for the start of the really big fireworks: presentation to a grand jury of a case alleging the fixing of motor carrier freight rates, together with an accusation that the unions got mixed up in the doings.



STEEL FOR SHELLS

The conversion from brass to steel for making shell cases (BW—Apr. 18'42,p8) through the use of the same punch press machinery as was used

for brass has reached the mass production stage at the Buick Motor Division of General Motors. Some 20 manufacturing plants are now in production. The steel cases are produced cheaper, effect a metals saving.

Work That's Vital to the War

Calling men up for war service and transferring them from nonessential to essential industries must be guided by the exact same criterion: How useful are they where they are now? To answer that question, Selective Service drew up its list of essential industries; the War Manpower Commission, as it launches its program of allocating men to war production and of quelling labor piracy in "tight" areas, will be guided, at least temporarily, by this same list:

Production of aircraft and parts.

Production, maintenance, and repair of ships, boats, and parts.

Production of ordnance accessories (production, repair and maintenance of guns, gun turrets, mounts, tanks, sighting and fire control equipment, torpedo tubes, etc.).

Production of ammunition (bombs, mines, torpedoes, grenades, chemical-warfare projectiles, explosives, fuses, pyrotechnics, and products such as glycerine which go into the manufacture of ammunition).

Food processing (fishing, meat-packing and slaughtering, butter, cheese, condensed and evaporated milk, canned and cured fish, canned and dried fruits and vegetables, canned soups, fruit and vegetable juices, flour and other grain mill products, prepared feeds for animals and fowls, starch, cereals, baking powder, rice, bread and other bakery products, sugar, leavening compounds, corn syrups, and edible fats and oils).

Forestry, logging, and lumbering (timber tracts, logging camps, sawmills, and veneer, lath, shingle, cooperage-stock, planing, and plywood mills, raising of tung-oil trees; fire prevention, control of pests, forest nurseries and reforestation services; gathering of gums and barks for the manufacture of naval stores and medicinal purposes).

Construction (highway, street and marine construction; approved industrial plants, houses, hospitals and military projects).

Coal mining.

Metal mining (iron, copper, lead, zinc, aluminum, mercury, manganese, chromium, molybdenum, tungsten, vanadium and similar ores, and the dressing of such ores).

Nonmetallic mining, and processing and quarrying.

Smelting, refining, and rolling of metals.

Production of metal shapes and forgings (the manufacture of castings, die castings, forgings, wire, nails, chains, anchors, axles, pipe, springs, screws, tubing, stampings, pressings, and structural shapes).

Finishing of metal products.

Production of industrial and agricultural equipment (power boilers; wiring devices and supplies; agricultural implements; electric lamps; storage and pri-

mary batteries; pumps, compressors, and pumping equipment; recording, controlling, and measuring instruments and meters; conveyors; industrial cars and trucks; blowers, exhaust and ventilator fans; mechanical power-transmission equipment; mechanical stokers; tools, files and saws; plumbers' supplies; professional and scientific instruments, photographic apparatus, and optical goods; all equipment necessary to operate plants producing essential equipment).

Production of machinery (engines and turbines; machine tools, equipment and accessories; apparatus for electrical public utility, manufacturing, mining, transportation and construction use, for incorporation in manufactured products, or for use in service industries; construction, mining, agricultural, oil field, food products, smelting and refining).

Production of chemicals and allied products.

Production of rubber products.

Production of leather products (sole and belting leather; industrial belting for transmission of power; boots, shoes and gloves for military and industrial use; saddlery, harness, and accessories).

Production of textiles (silk and nylon for parachutes and powder bags; canvas for tents, sails, tarpaulins, etc.; cotton, woolen and knit goods for military use).

Production of apparel (for the armed forces and work clothing).

Production of stone, clay and glass products.

Production of petroleum, natural gas and petroleum and coal products.

Production of finished lumber products (cork products such as life preservers, storage battery boxes, and insulating material; oars, matches, and wood preservation; wooden parts of aircraft, ships and other military equipment).

Production of transportation equipment.

Transportation services.

Production of material for packing and shipping (textile bags, vegetable and fruit baskets, cooperage, wooden boxes, excelsior, pulp and paper, paper bags, paperboard containers and boxes, glass and fiber containers, cordage and twine, metal barrels, kegs, drums, and cans).

Production of communication equipment.

Communication services (telephone, telegraph, newspaper, radio broadcasting and television services, and the repair of facilities).

Heating, power and illuminating services.

Repair and hand trade services (blacksmithing; armature rewinding; electrical and bicycle repair; automobile repair and service; harness and leather repair; clock repair; tool repair and sharpening).

Health and welfare services, facilities and equipment.

Educational services.

Governmental services.

Who Gets Men?

Enlistments, draft, war industry all vie for personnel, and War Manpower Commission must help set the policy.

The manpower problem is moving into unexplored ground. Employment in war and war-connected industries, already at some 12,500,000, is climbing at about a million a month.

This is a substantially bigger shift than was ever made in the last war. Size of the Army is a military secret, but it's no secret that Selective Service will soon have to cut a much deeper slice out of the population than in 1917-18.

● **Ticklish Job**—The War Manpower Commission, just emerging from three months of internal bickering and external inactivity, has before it a much more delicate and explosive problem than merely assigning order numbers to men of military age and deferring the obviously unsuitable—which is about all manpower allocation has so far amounted to.

This is not to say that you should expect soon to see the day when every man is assigned his job and does it, willy-nilly. Beside the fact that such a politically appalling program is not yet necessary, there's nowhere in the country an organization ready to undertake it.

● **Outside Factors**—Nevertheless, that is the end toward which every step taken from now on moves. Speed of progress depends less on political factors here than on such things as Russian firmness at the Don and the military genius of Rommel.

These are the steps in the immediate offing.

Imposition within the next few weeks of federal controls over labor-raiding in critical areas.

Expansion of these controls into a primitive system of labor priorities.

Development of a more scientific system of occupational deferment from the draft.

Elimination of voluntary enlistment, either in the Army or Navy, of draft-age men.

Preparation of a National Service Act to provide the legal foundation for total manpower allocation. (This is now being written but is unlikely to come before Congress until after election.)

● **Antipiracy**—Paul McNutt's policy on war contractors' stealing men from each other makes the usual bow to voluntary methods. Labor and management groups in war-production centers are being encouraged to get together and promise to be good boys. Agreements are being worked out by which each employer promises that, before hiring a

man now working in a war industry, he'll get the consent of the present employer.

This voluntary system has two big weaknesses. For one thing, any single employer who's prepared to disregard nasty letters from Washington can upset the whole scheme.

● **Won't Stay Voluntary**—Another point is that not all "piracy" is undesirable. If a worker can do a more important, harder-to-fill job in some other plant than the one he's in, he ought to move. And employers are naturally going to try to hold their labor force together. Moreover, labor is suspicious of blacklists.

So, in the really critical areas, the scheme won't stay voluntary long. A half dozen or so areas have already been picked and will be declared "critical labor areas" as soon as McNutt can get his field organization set up. These include Detroit, the northwestern ship and plane production centers, some New England cities, and several production centers on the East Coast.

● **USES to Have Charge**—In each of these areas, a list of "critical occupations" will be set up. Then, if any employer in the area wants to hire a man in one of the critical occupations who is now working in an essential industry, he must clear the transaction through the U. S. Employment Service.

"Essential industries" will be separately defined in such critical area, but in general the definition will follow the list issued early this month by the Selective Service (tabulation page 18).

● **Free Play, for a While**—Initially, at least, employers in the critical areas do not turn over the entire recruiting job to USES. They can still freely hire men who are unemployed or working in non-essential industries. Procedures on non-critical occupations are unaffected. And employers may even scout out for themselves skilled men now working in essential industries, though then they have to get USES approval to take them.

Obviously, the natural evolution of such a system is for USES to assume more and more of the initiative in hiring. It's likely that war plants will be required to obtain the bulk of their men from the employment service. In preparation for that time, WPB is now starting to get together a list of plants, or possibly industries, in order of war importance.

● **Where the Army Stands**—Piracy by the Army—through the draft—is a closely related problem from the point of view of the employer. Since the early months of the war, when occupational deferments were restricted to essential industries, there has been no important change in the deferment procedure.

Present procedure is simple in theory, is likely to prove inconsistent and uncertain in practice. A local draft board may defer an otherwise eligible man if he is working in a war industry or an essential civilian occupation, if he holds a skilled job, and if it would be difficult to replace him because of a scarcity of men having that skill. Such a deferment is for six months, theoretically to allow time for training a replacement, but the deferment is renewable.

● **Dependency Status**—Moreover, a man with dependents who works in an essential industry will not be drafted until after men with the same degree of dependency who work in nonessential industries.

Selective Service has tried to improve this system by issuing memoranda to the local draft boards on what industries are essential and in what occupations there are shortages. A dozen or so detailed analyses of particular industrial situations have been issued, plus this month's "umbrella list" roughly indicating all industries which might be considered essential.

● **Shift to Company Basis**—Possibility of a completely different approach is now being thrashed out within the manpower commission. Instead of treating

the matter entirely in terms of individuals, this would start by considering a plant or company as a whole. It would call for a careful analysis of the manpower problems of an individual plant.

From this a pattern could be worked out of what personnel must be retained, what can be replaced by women or older men, what can be spared. Then a program of deferments could be worked out.

● **Further Refinements**—An additional possibility is to use this same approach to reduce the total number of deferments by combining occupation and dependency. Thus a married man or a man in his early forties who held an essential job might be indefinitely deferred, where a younger or single man with the same job might be deferred only long enough to permit training a successor. Wherever the job permitted, new hiring could be aimed toward women, older men, men with families.

Thus an integrated, consistent personnel policy could be worked out for each employer. Experimental studies of this nature are now under way at several places.

● **The Enlistment Problem**—Clearly, no such delicately balanced scheme can work well as long as voluntary enlistment is permitted. The Navy now takes men with complete disregard of the importance of the work they are doing in civil life. Ever since the war started, it's been under pressure to abandon enlistment and get its men through the draft. The pressure is now becoming much heavier and action soon is not unlikely.

Any such move would also have its repercussions on occupational deferment policy. The Navy demands a rather high proportion of men with skills, and Selective Service would have to adapt its procedures to meet the problem of providing men according to their occupations. And to an increasing extent, the Navy wants the very men who are now working in war industries.



WOMEN SHIPBUILDERS

One of the few Men-Only sanctums—the Philadelphia Navy Yard, Indus-



trial Department—is due to be invaded soon by a contingent of girls who are now being trained in Navy-prescribed courses at several of Phila-

delphia's vocational high schools. They are learning the craft wood-working (left) and that of the loftsmen's art (right).

Hold That Light!

Since matches are higher, they aren't handed out so freely, but supply has been assured by industry's far-sightedness.

Tobacco stores aren't tossing book matches across the counter nearly as freely as they once did. This is due wholly to higher prices, in which the federal tax of 2¢ per 1,000 matches (levied since last Oct. 1) is a big factor.

• **OPA's Price Schedule**—On resale book matches, the kind on which the match manufacturers sell the cover space for advertising, the Office of Price Administration fixed a manufacturers' delivered price of \$3.60 per case of 2,500 books (15¢ more on the West Coast) plus tax, effective May 11. For "thank you" type matches carrying the retailer's own advertising, 50¢ per case may be added to the maximum.

Now in OPA's mill is an order that will fix maximum prices on so-called "high class" book matches, which may carry the initials of the buyer, some novelty design or no imprint whatever. OPA is also considering putting a ceiling price on strike-on-box matches. Until it does, the March price level is the ceiling.

• **Custom Is Binding**—Whatever a retailer's practice on give-away matches was in March, he is, technically, at least, bound to it now by OPA's General Maximum Price Regulation. If he gave a book of matches with each pack of cigarettes then, he's supposed to do so now. The principle expounded by OPA is that the customer should get the same value for his money as he got in March.

The War Production Board's Chemical Branch says that, so far as supply is concerned, there's no reason for cutting down on distribution of book matches. Potassium chlorate, the main ingredient of matches, is a critical material used in munitions and was put under complete allocation control June 1 (Order M-171), but the industry, remembering its sad experience in the last war, previously had taken steps to build up and conserve the domestic supply.

• **Imports Replaced**—Prior to 1939 the bulk of potassium chlorate was imported from Japan, Germany, Sweden, France. Until that year the only significant domestic producer was the Oldbury Electrochemical Co., Niagara Falls. Diamond Match saw what was coming and now a Diamond subsidiary, Uniform Chemical Products Corp., is the other principal producer.

Imports dropped from 11,627,000 lb. in 1939 to 245,000 lb. in 1941. In the meantime, several small producers came

in, primarily to supply the lucrative export field opened up by cessation of European exports. The result is a projected domestic production this year of more than 20,000,000 lb.

• **Saving Is Required**—Because of the heavy drain of military and lend-lease requirements for potassium chlorate, however, a saving must be made somewhere and most of this has to come out of the largest use, matches. WPB's allocation order provides first for the creation of a generous stockpile of potassium chlorate to meet contingencies, and for rationing the remainder among the match manufacturers every month on the basis of the two-year average consumption (1940-41) of each manufacturer, adjusted to the industry's average unit consumption in 1941.

The unit is the match and consumption of potassium chlorate per match was reduced voluntarily by the manufacturers last year by more efficient operation. The industry's average consumption in the early months of this year was still lower, so WPB's allocation order was not nearly as onerous as it might have been in the absence of the industry's voluntary cooperation. Where allocation of supply results in hardship, an adjustment is made.

• **Quality Maintained**—There has been no perceptible lowering in the quality of matches. Both WPB and the industry know that nothing will be saved if a smoker must strike two or more matches before he gets a light.

The match manufacturers are practicing economy in the use of other materials. A lower grade wax, usually called slop wax, is being substituted for the highgrade paraffin previously used to impregnate the end of the splint.



20-YARD TRAILER

Trailers with dump bodies that hold 20 yards of coal (approximately one-fourth of a standard 55-ton railroad dump car) are now being used by Union Collieries Co., Pittsburgh, to transport small lump coal from tipples to dump sites. Built by Fruehauf and powered by Brockway tractor units, a fleet of five trailers haul 1500 yards of coal a day. Unloading time: 1 minute.

Small Pool Clicks

De Land, Fla., shows the way for plants in remote little towns anxious for war business. State adopts plan generally.

The Johnny J. Jones circus emerged from its winter quarters at De Land, Fla., two weeks ahead of schedule this year. Reason was that the show hibernates in the Volusia County fairgrounds, and the fairgrounds had to be vacated because they were needed to expand production of a war item being manufactured by a pool of small plants in the community.

• **Cause for Jubilation**—There have been pools and pools—at York, Penna., Kansas City, Mo., Toledo, Ohio, and hundreds of others. But a successful pattern of cooperation for small plants in small towns far from industrial centers is still being sought by officials worried over the fate of the small business man.

That is why the War Production Board sent a photographer to take pictures of the De Land venture for national distribution and why Florida is accepting it as a model for a statewide pool-development program. Its sponsors admit that De Land's contracts of \$2,570,000 are no great shakes in these days of billions; but they add that you can't count their true significance in dollars.

• **Reversing a Trend**—This time last year it looked like the inland town of De Land was going to dry up and blow away. Its population of 7,400 was being steadily drained as workers with their families left to find work in distant war plants. Stores closed for the night—and didn't open next morning. The shut-down on automobiles made tough picking for dealers, garages and repair shops.

It was in this cheerless atmosphere that a new city administration came into office. In August the city fathers decided:

"We've got to hit Washington for war work."

City Manager William J. Deegan, Jr., who had hardly warmed his official chair, was hurried off to the national capital. With him went V. C. Babcock who personified another civic problem.

• **Washington Runaround**—Babcock had a small aircraft factory at De Land. He catered to civilian flyers, but war demands had shut down both on his materials and the activities of his customers. Babcock had appealed to the city commissioners for help. Since most noise was being made about the need for aircraft production, the commissioners decided that Babcock would be a good man to skirmish for contracts in Washington.

In the fevered war capital Deegan

"Unforeseen events... need not change and shape the course of man's affairs"



NOT ENOUGH HANDS

EVEN THIS TIBETAN GOD doesn't have enough hands... or heads... to keep up with the relentless demands made on some of today's executives.

Many of these men are tackling complex production jobs they never tried before. All are pressed for time... determined to meet, and beat, schedules.

They have been forced to adopt shortcuts... to accept many new employees at face value or to hire them on shorter investigation... to give more of their attention to the job of producing

and less to the essential details of accounting.

For protection against loss... in material or in money... farsighted executives in these circumstances turn to fidelity bonds. Such bonds, written by surety companies like The Maryland, eliminate employee dishonesty as a source of financial worry.

Fidelity bonds are written in many forms. A Maryland agent or broker will be glad to tell you more about any of them. Maryland Casualty Company, Baltimore.

THE MARYLAND

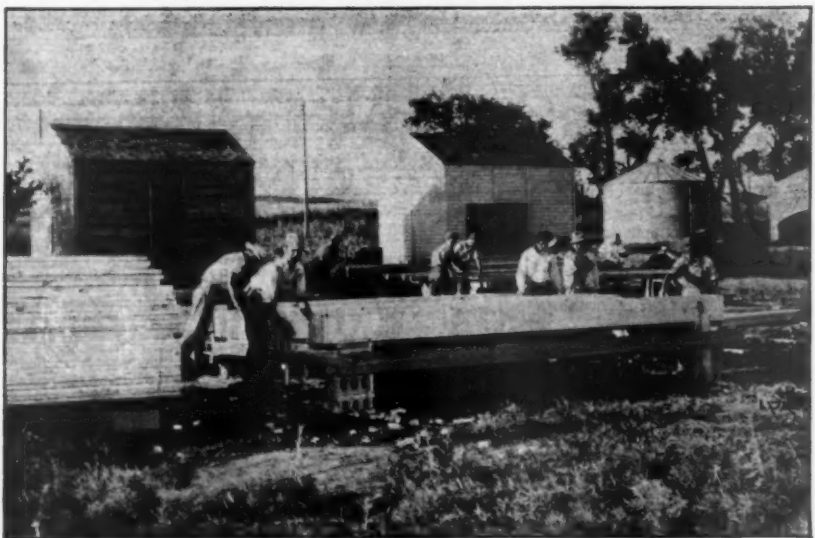
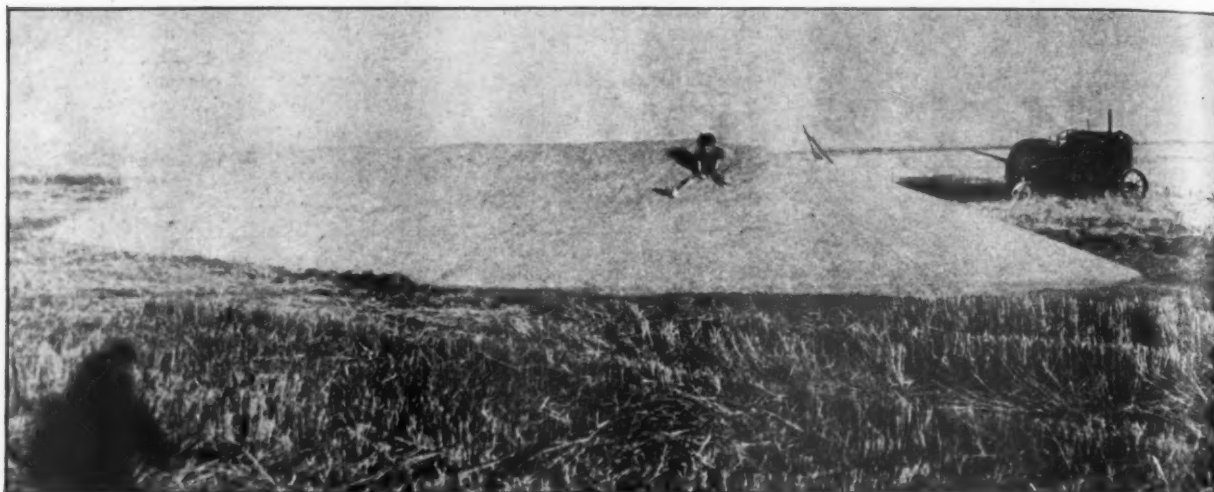
Practically every form of Casualty Insurance and Surety Bond, for business, industry and the home, through 10,000 agents and brokers.

and Babcock repeatedly bumped their noses into a barrier which had foiled thousands of small business men before them. The De Land plants weren't big enough or responsible enough to qualify for contracts. Instead of orders, they

were given details of the government's plan for pooling small enterprises.

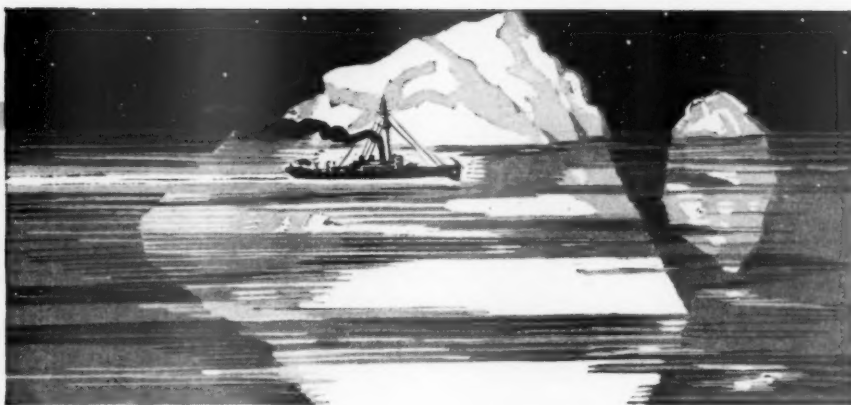
● **Setting up a Pool**—The plan didn't look like much but it was something to start with, and De Land got busy. Office of Production Management (now WPB)

requirements called for a survey of the community's machines and production equipment, and the selection of a prime contractor of sufficient standing to sign with the government and parcel sub-contracts to the underlying plants. The



SURPLUS SPILLS OVER

Dam gates on the wheat crop are closing and the backwash is rising. With nowhere to go, the harvest is simply staying at home, as the pile of Kansas wheat (above) testifies. Last week Chicago, Milwaukee, and Kansas City embargoed free grain (25 terminals previously had received storage grain only on permit), and with a minimum of space reserved for emergency handling of wheat that badly needs conditioning, these terminals will hereafter, in the person of the terminal grain committee, let the railroads move into their storage area only as much grain as consumption takes out. Meanwhile, the continuing harvest produces more wheat and as the plugged-up terminals shut off the country elevators, the country elevators in turn shut off the farmers, and the wheat goes on the ground, into barns, sheds, garages, hotels, and homes. The Commodity Credit Corp. has moved 7,000 steel corn tanks from the Corn Belt into wheat lands (BW-Apr.25'42,p81) by truck (dismantling under way at left) and now the CCC and private interests are rushing construction of wooden bins (lower left) to hold the overflow of what will be, by September, about two years' supply of wheat. In the Dakotas a wood storage bin industry is springing up, and a tourist cabin operator has converted auto camp houses into grain bins. This week the CCC earned cheers from one terminal when it moved wheat out of Kansas City into eastern distilleries for alcohol manufacture and donated the emptied space to harried warehousemen. Despite everything, however, much new crop wheat will remain homeless for lack of storage facilities.



YOUR INSURANCE PREMIUM *is only the Tip of the Iceberg*

Nearly 90% of an iceberg is submerged. Most of the weight lies below the surface, where you never see it.

It's that way with business insurance, too. The premium—large and conspicuous as it may sometimes seem—looks insignificant when you remember its relation to the importance and value of the property insured.

Take, for instance, fire insurance on a modern \$2,000,000 plant or office building. Under favorable conditions, the annual premium may range from \$1,000 to \$2,000. In either case, the relation between premium and possible loss is obvious.

The moral is so commonplace that it is often overlooked: *Don't be so concerned with the premium as to forget that the more important thing is the protection.* Remember the importance of the contract itself—two insurance policies intended to cover the same property or operation, and having identical premium costs, may so vary in terms and

conditions as to produce different settlements in case of loss.

Business insurance is technical and complicated. Have your contracts negotiated and bought for you by a competent insurance brokerage organization—a *buyer*—not a seller—of insurance. The broker is independent and unbiased—buying in the open market, with a knowledge of the whole market. He works solely in *your* interest. He knows how to shape contracts to fit your particular requirements; how to determine and negotiate settlement of your losses. His compensation is not an extra fee from you, but a brokerage paid by the insurance companies.

If you would like a clear picture of why the insurance premium is only "the tip of the iceberg," a Johnson & Higgins representative will call on request.

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WE HAVE LAST LONGER!**

EVERYTHING counts in "total war." Your Wayne Equipment today is doubly valuable. It's a national asset in your care . . . and ours. We want to help you keep it functioning at top efficiency. We want to help you speed production to win the war! That's our only aim today. Send for our new Users' Guide, a free booklet containing helpful hints on "preventive maintenance" for Wayne Air Compressors and other equipment. With proper care on your part it should easily outlast the war and serve years after. Our nationwide service organization is ready to help at your call.

THE WAYNE PUMP COMPANY
FORT WAYNE, INDIANA



city commissioners delegated Deegan to coordinate this work. The Chamber of Commerce undertook the survey of plant facilities. In September the drive shifted into high. Toughest problem was selection of the prime contractor. Here Babcock, the suppliant, became Babcock the solution. His aircraft corporation appeared the only answer for a prime contractor, but there was talk of the plant leaving De Land. That was solved by complete reorganization of the company, with Deegan and local business men replacing out-of-town men on the board of directors.

• **Reconstituting the Management**—Earl W. Brown, general manager of the Florida National Exhibits, became Babcock's board chairman. Maxwell W. Harvey, a New York engineer who had been an operations executive of the New York World's Fair, became president and general manager. Babcock, a combat pilot in the last World War, and a plane builder for the past 20 years, was given a post agreeable to his background, he was made engineering head of the plant with the title of vice-president.

First job of the rejuvenated management was recruiting of capable labor. It analyzed 3,168 job applications from skilled and semi-skilled mechanics, trainable workers, unskilled men, youngsters in vocational classes. With the aid of Mrs. Mary Karl, county director of vocational training, a program for developing the type of skills needed was put into effect.

• **Bucking the Red Tape**—The paper forms were complete and everything looked fine when Harvey, Babcock, Deegan, and Brown returned to Washington in late September to present the qualifications of the Babcock concern as a prime contractor. They found that enthusiasm doesn't prevail against the convolutions of red tape. For weeks the De Land pilgrims felt like the pellets in a pin ball game as they bounced off one procurement agency after another. But they never allowed themselves to get pocketed. They flooded OPM with copies of their brief, they talked to everybody who would listen.

Finally, OPM approved the Babcock plant as a prime contractor, but that didn't give it a war order. So Deegan and Babcock hot-footed it to the Army Air Corps procurement depot at Wright Field, Dayton, O. Babcock knew many of the air officers, and Deegan, the salesman, sold for all he was worth. But the pin ball process started all over and the two fell back on De Land.

• **An Educational Order**—Perseverance, at last, resulted (Nov. 12) in an educational order for Babcock. It called for assembly stands on which plane motors are put together and was for \$42,000. Out-of-town friends had to pour in new capital, and Babcock had to redesign the stand to avoid unavailable

metals before the order was completed. There had been so many disappointments that the townsfolk were still dubious though the real contract was approved at the end of December.

Skeptics said "I told you so" when production was stymied by the discovery that no member of the De Land pool could produce worm gears and drives called for in the specifications. Earl LaRoe saved the day. Earl ran a backyard machine shop at Eustis. The Babcock searchers practically kissed his door posts, for there inside, almost idle, were the only machines in central Florida that could turn out the gears and drives. Now LaRoe, his wife, his son, his sister and his daughter-in-law are cheerfully producing the vital units.

• **In the Big Time**—About 58% of the contract is farmed out to 14 shops in five central Florida cities. The Babcock plant is the assembly point. A second order lifted the total for assembly racks to two and a quarter million. The plants are now at capacity.

It was the expanded orders that crowded the Johnny J. Jones shows on the road ahead of time to make more room at the fairgrounds for the pool project. Increase in vocational training readied most of the 500 workers who now work three shifts.

Word of the De Land pool got about and cities in 25 states wrote in asking advice on copying the plan. WPB is promoting the idea. In March Deegan got leave of absence from Babcock to join the Florida State Pooling Board.

• **Model for State**—The De Land experiment is already the basic pattern for the 18 county pools and for the 15 counties that have joined larger community pools. Five millions in war contracts have been obtained for members, \$15,000,000 more is under negotiation. The State pooling is under the Florida Defense Council. Through surveys of equipment, selection of prime contractors, aid in providing finances, manpower, and engineering management the council is making the full production of Florida equipment available for WPB. Also its program is going to bolster the sag in state revenues that will follow the rubber and gasoline shortage, and the tourist trade slump.

A DELIVERY PROBLEM

To maintain quality in fresh eggs, when it became necessary to cut deliveries to grocers to three a week (even to two on some routes) Mandell & Co., Los Angeles wholesalers, adopted pre-cooling. This results in eggs holding freshness 48 to 72 hours longer than with ordinary handling, it is estimated.

The eggs are gathered from poultrymen, cooled at a temperature governed by weather, hauled to town in the cool hours. The grocer can keep them in his own cooler, or without refrigeration.



How does telephone "scrap" help toward victory?

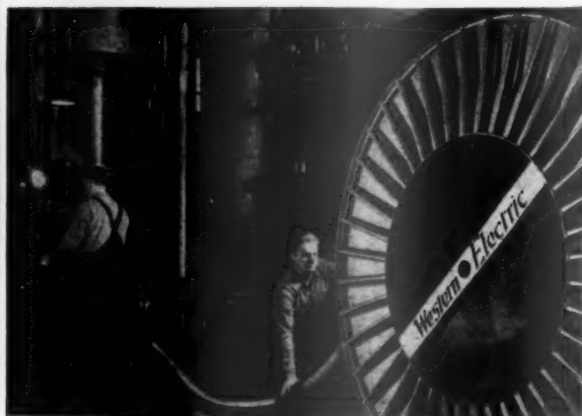
Metal weighing more than a battleship is salvaged each year by Western Electric. When telephone equipment is worn out, we refine the old metal and make it available for use again. In view of today's scarcity, this practice is especially valuable to the Army, the Navy and industry.



① THE SCRAPPED EQUIPMENT IS SENT from Bell Telephone Companies all over the country to Western Electric's smelting plant in New York.



② RECLAIMING OF METAL is in line with Western Electric practice of conserving materials. It has been in operation for more than 25 years.



③ REFINED METAL once went back into new telephone equipment. Today it reports to the armed forces, in communication apparatus made by us—



④ AND IN PLANES, TANKS, GUNS, SHIPS. Propellers like these, one for a battleship, the other for a Navy dredge, are made of telephone "scrap."

Western Electric

... Arsenal of Communications



More New Buses

WPB's postponement of a manufacturing shutdown assists transit companies for present, but acute problems lie ahead.

Transit officials in most of the nation's big war-production centers breathed easier this week. Just three days before the manufacture of buses was to cease in preparation for full conversion of that branch of the automotive industry to war work, the War Production Board's hard-boiled requirements committee relented and agreed to let operations continue until virtually the end of the year.

• **Reckoning Postponed**—As a result, the transit companies' day of reckoning is postponed. How long will depend on what happens on the gasoline and rubber fronts. The companies, which are now carrying daily a number of passengers comparable roughly to last year's peak, will get delivery on most of the vehicles which they have on order to meet next winter's loads—loads which will be augmented by the gas and rubber shortages.

WPB's decision to permit completion of the additional buses was based on the advice of its transit section, which pointed out that tires to equip the new buses had already been manufactured and were merely being held in the stockpile for rationing. The section argued that these tires should be put on needed equipment now, to prevent a breakdown in service next winter.

• **And If Necessary**—If the stockpile of bus tires runs out later—so the reasoning runs—and there is still no rubber to be spared, then vehicles can be pulled off the streets. And the vehicles retired in that event will be the older and less efficient ones, wasteful not only of tires but of fuel.

About 3,600 big buses are involved. WPB's June order, which would have

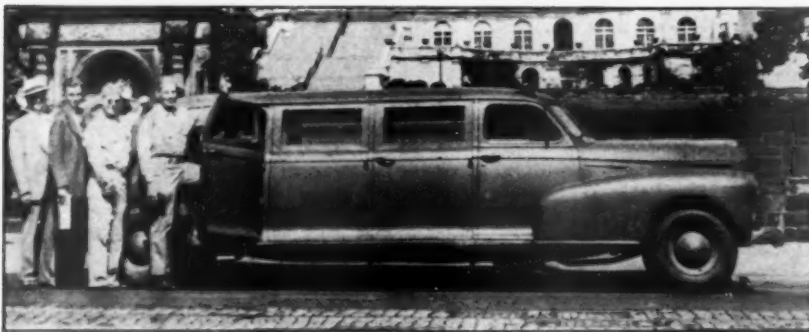
shut off production July 18, permitted assembly of only 900 units for which manufacturers had balanced inventory on hand as of June 8. Now manufacturers are eligible for production requirements ratings to obtain materials to match up the 3,600 incomplete sets of parts they also had in stock June 8. • **Year's Prospects**—These 3,600 buses, plus the 900 and 4,500 delivered prior to June 8, add up to roughly 9,000 new buses for transit service this year. In addition, a swollen production this year of adult bus bodies for mounting on truck chassis will mean that nearly 15,000 buses will enter service in 1942, either in transit fleets or on lines operated by war plants.

All told, the Office of Defense Transportation wanted 10,000 transit buses this year, plus a normal complement of bus body-truck chassis jobs. The fact that production of the latter type has outstripped expectations more than evens up the overall total which will be available.

• **Operating Headaches**—During 1941, intercity and municipal transit operators were estimated to have carried 4,413,000,000 revenue passengers, against 3,736,734,368 in 1941, a gain of 18%. That the passengers were squeezed in tighter becomes evident when figures on buses in revenue use are analyzed, for they increased only 12.5% in the two years—57,962 in 1941 and 51,531 in 1940. Aside from these, there were 93,398 school buses operating in 1941; 93,306 in 1940.

• **Scrapping Rate**—Along with maintenance, bus wearout is significant in the light of the approaching end to replacements. The five-year average of bus scrapping, indicated by production and operating figures, is 3,763 units per year, around 7% of the total. Bus men say that a parallel loss of buses, or anything like it, in the months ahead would be a staggering blow to transit.

As for the bus manufacturers themselves, output reductions will not affect them too significantly. They are generally engaged in war work.



SEDANBUS

A low-priced sedan with frame and body extended is being tested by the

Office of Defense Transportation, Washington. The inserted section, six feet long, includes three extra seats. Total seating capacity, 15 persons.

Fair Today

Despite ODT request for cancellation of state and county fairs, most local authorities have gone right ahead.

Request by J. B. Eastman, director of defense transportation, that 1942 fairs be canceled to avoid cluttering up traffic and wear on tires, brought a snort from 2,200 North American fair secretaries that could be heard from bandstand to pig exhibition halls. To date, only about 20 have complied, mostly those in weak financial status or state fairs whose grounds have been occupied by the military.

• **It's Not All Fan Dancers**—Easy to dismiss as trivial are fairs when judged by their billing. The aerial acrobatics of Selden, the stratosphere man (works positively 138 feet in the air), the dude ranches, the rides where girl bumps boy, the races—these get the advertising. As *Billboard Magazine*, bible of the exhibitors, says, "All work and no play gets no jack—fun zones feed the coffers."

But down beneath it all is an economic angle as fundamental as the farmer giving bran to his cow so she will stand quietly while milked. American fairs are as earthy in motives as the pork and old iron fair at Place de Bastille, as the Stourbridge and Bartholomew ancestors in old Europe.

• **Scope of the Operation**—Right now the curtain is ringing up on a season that is expected to attract 65,000,000 persons to plants that represent a total investment of about \$500,000,000. From July through September fairs will give a living to:

70,000 people employed by 350 carnivals.

10,000 pitch men.

50,000 grand stand shows, working for 100 outfits.

1,000 employees of commercial exhibitors.

20,000 people with racing stables.

No squawk ever goes up about fairs taking money out of town, as with circuses, because they are locally owned and managed. Not only are all the hay and feed, pop, hamburgers, frankfurters, ice cream, and delicatessen bought locally, but most of the lunchrooms are operated by townspeople.

• **Just One Sample**—No statistics exist, but the market is considerable. The owners of one string of stands at the Wisconsin State Fair sold three tons of ground meat and two tons of frankfurters to 122,000 visitors in a day.

What further comforts the local businessmen is the shower of prize money which rains down on them almost exclusively, aside from race track purses. In one year Minnesota paid out \$87-



Wanted: Future Faradays and Curies

ALL OVER AMERICA there are high school seniors . . . boys and girls . . . who have potential scientific ability and budding creative genius of a high order. These talents are latent . . . awaiting the opportunity for further development through higher education.

To provide this opportunity, Science Clubs of America, sponsored by Science Service, conducts an *Annual Science Talent Search* . . . made financially possible by Westinghouse. This Talent Search has three major objectives:

- 1. To discover and foster the education of boys and girls who possess exceptional scientific skill and ability.**
- 2. To focus the attention of large numbers of gifted youth on the need for perfecting their creative and research skill . . . as future contributions to winning the war and the peace to follow.**
- 3. To help make the American public aware of the role of science in war and in the post-war reconstruction.**

High school seniors, who enter the Science Talent Search competition, take special examinations in their

local schools and submit essays on "How Science Can Help Win the War."

Each year, forty winning contestants are given all-expense trips to Washington, D. C., where they meet some of the country's foremost scientists, visit scientific institutions, and take part in interesting scientific programs of various kinds. While at the Nation's Capital these embryo scientists are given additional written and oral tests.

The first year's competition was completed this July, when the 40 winners of trips to Washington were chosen from 10,000 entrants, of whom 3200 completed science-aptitude examinations and submitted essays.

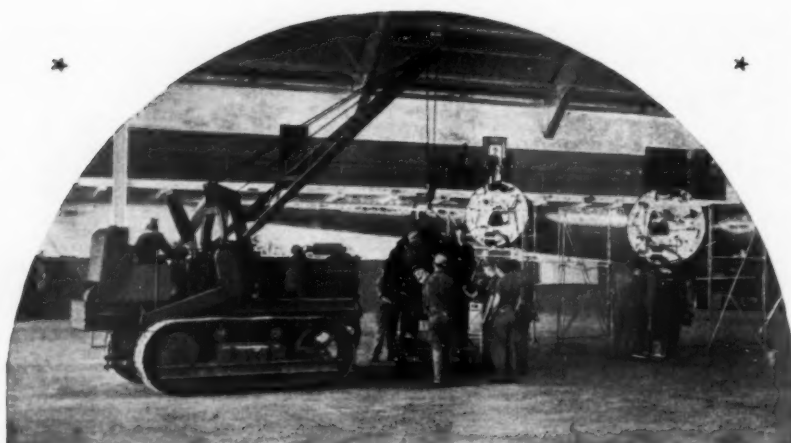
Judges then selected the two most talented youngsters . . . a boy and a girl . . . who were awarded Westinghouse Grand Science Scholarships of \$2400 each. Additional Westinghouse Science Scholarships . . . each valued at \$200 . . . were given to eighteen contestants.

By aiding the education of these gifted boys and girls today, we hope to help develop the scientists of tomorrow who will lead the way in the advancement of research and engineering.



Westinghouse

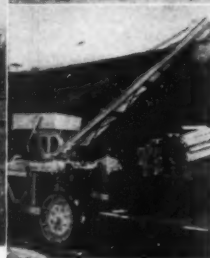
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CRANES**



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By Hughes-Keenan

Load-Handling Specialists Since 1904

101 in awards, New York \$105,588, Indiana \$124,699, Iowa \$97,950, Toronto \$125,000, and Ionia, Mich., \$10,658.

• **Ribbons—And Cash**—The Ebensburg, Pa., catalog is a typical sample: You can win \$25, \$10 or \$5 on farm horses, \$6, \$5, or \$3 on swine, \$1, 75¢ or 50¢ on celery. Future farmers of America and 4-H boys and girls enjoy special divisions. Prize-winning canned cherries, chocolate cake, pies, cookies, bedspreads, afghans or quilts are good for a piece of folding money as well as a ribbon.

Truth is, all the gawping that takes place is a mighty stimulant of trade. Local merchants find it pleasant to lead prospects to exhibits; people get ideas on what to buy with the harvest money jingling in their pockets.

• **Place in History**—Fairs have been great developers of marketing aids, dating as they do back to the dark ages when whole dukedoms traipsed to town to stock up on necessities and luxuries. Out of this medieval trading came uniform weights and measures, the idea of inspection and grading, mediums of exchange and letters of credit.

Everybody agrees that fair-time relaxes the drawstrings on rural pocket-books. No statistics exist, but American towns find that their annual fairs give a mighty fillip to retail trade.

• **Some of the Exhibitors**—Increasing attention is being paid to fairs by manufacturers. At one state fair last year, 216 manufacturers exhibited. Pillsbury, Singer, Encyclopedia Britannica, General Electric, National Battery, Chevrolet, Dodge, American Stove, and Allis-Chalmers are steady patrons; International Harvester has been at it for 38 consecutive years. Allis-Chalmers exhibits are perhaps typical of those more intelligently designed to attract farmers. The program consists of running ice water, picnic tables, plenty of chairs, a stage show, and a tractor rodeo. Even the U. S. Government has been a regular exhibitor, with displays dealing with the Treasury, Navy, Army, Red Cross, health, and agriculture.

So, despite ODT's objections, the 'mikes will again this season echo with "step right up, ladies and gentlemen," and the International Association of Fairs and Exhibitors will celebrate its 52nd anniversary. Fair secretaries claim only state fairs stimulate travel.

FIGHT ON RENT CEILINGS

There's an organized fight under way against the Office of Price Administration's rent ceilings. A group of real estate owners from 20 cities, meeting in Chicago on Monday, contended that the ceilings were too low, and called on Leon Henderson to meet interested parties within ten days to consider revisions.

Rent-freezing dates in all of the cities

represented were early in 1941, and the group contends that, due to increased taxes and operating costs already incurred, the ceilings are "not sufficient to give the owner a fair and equitable return."

A similar demand the previous week by a group of Detroit landlords and property owners brought from Henderson an immediate retort castigating this "effort at political intimidation."

Union Pay Freeze

Agreement of the A.F.L. building trades to stabilization at that level leads to plan to apply it to all construction.

If, a year or so ago, one were to have guessed at the first union group which would voluntarily accept a wage-freeze, the powerful, turbulent building trades unions would have been somewhere at the bottom of the list. Yet last year the construction trades voluntarily standardized on time and a half for overtime—as opposed to the double time many of them had been getting. And since the first of this month the wages on all federal work—which now comprises the bulk of construction—have been substantially frozen at the level of July 1.

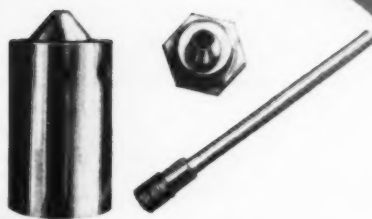
• **Making It Permanent**—Meanwhile, the Office of Price Administration is getting ready to impose what may prove an even more rigid straitjacket on the July 1 wage level. Due soon is an OPA regulation forbidding contractors to charge more for a job than cost of materials plus labor cost at July 1 wage rates plus a specified percentage of direct cost (BW—Jul. 11 '42, p. 5). This would mean, in the absence of an adjustment by OPA, that any increase over July 1 levels would have to come directly out of the contractors' pockets.

The OPA proposal has still to get the approval of federal construction agencies, some of which may not welcome quite so rigid a control (since it would interfere with the labor raiding on which many rush construction jobs rely for manpower). Moreover, the scheme may run into technical difficulties because of the complex wage structure in the building industry.

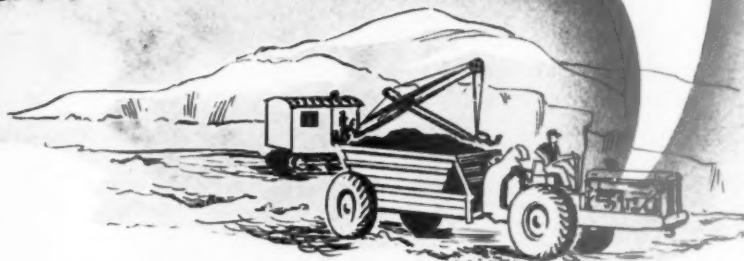
• **Local Problems**—Many contractors, for instance, handle a wide variety of jobs and recruit a new labor force for each job—from local labor at local rates. In addition, a given area will have both a union and a nonunion rate; in some places it's more or less a matter of choice with a contractor whether he will recruit his labor through the unions or not.

Nevertheless, the possibility of OPA entrance into the field is already raising fears for the stability of the delicate

POWER for Giants...



that tear down mountains!



Tough Problem + Stainless Steel = Product Improvement

Day after day, these Diesel engine parts help to provide the power that keeps giant excavating shovels and haulers on the job. The construction of far-off airports and military bases can't wait for spare parts ... so Carpenter Stainless is used for these fuel injection parts that must combat terrific pressure and corrosive Diesel fuel oil.

And this Stainless is also indispensable in plants like yours, where it keeps valves, pumps, heat exchangers and instruments at top efficiency. It provides the strength, rigidity and

heat resistance that spell death to once "common" maintenance troubles.

Then too, long-wearing Carpenter Stainless Steel is adding months, even years, to the lives of consumer products like electrical appliances and typewriters—hard to replace right now.

In many plants where this easy-to-fabricate Stainless is used, Carpenter service men are helping Engineers to get wartime jobs done faster. If you could use some of this trouble-shooting help, drop us a line.

THE CARPENTER STEEL COMPANY, READING, PA.

Carpenter

STAINLESS STEELS



...for

Strength
Rigidity
Heat Resistance
Corrosion Resistance
Longer Product Life
Sales Appeal

BRANCHES AT Chicago, Cleveland, Detroit, Hartford, St. Louis, Indianapolis, New York, Philadelphia

balance of quid pro quo involved in the wage freezing agreement between the 19 building trades unions of the American Federation of Labor and the U. S. Department of Labor.

• **Prevailing-Wage Problem**—The Labor Department has always had an intimate concern with construction wages as a result of the Bacon-Davis prevailing

wage act. Under this law, the department must determine for every federal construction project the prevailing rates.

The agreement worked out last May, which became effective this month, provided that the Department would consider the July 1 rates the prevailing rates from now on. On their side, the unions agreed not to ask for an increase

except with the approval of a new Wage Adjustment Board. Assistant Secretary of Labor Tracy is chairman of the board, which contains two labor representatives and two members representing federal construction agencies.

• **Board's Policy**—The real significance of the agreement depends, of course, on the line taken by this board. So far it

WAR BUSINESS CHECKLIST

Washington's Significant Orders on Materials and Prices

• **Fire Equipment**—Manufacture of stirrup pumps, except on order of war agencies or lend-lease governments, is forbidden by amendment of L-39. Parts fabricated before July 11 without use of nonferrous metals may still be assembled. Additional restrictions are imposed on extinguishers.

• **Electric Ranges**—All dealer stocks of electric ranges as well as manufacturer and wholesaler stocks of ranges with a factory sales value of \$80 or more are released for sale by amendment of L-23-B. Buyers must certify that the range is needed to replace an unusable one or that no other cooking equipment is available and that electricity is installed.

• **Industrial Trucks**—Delivery of industrial power trucks is forbidden by L-112 except on orders placed before July 10 and rated A-1-k or on orders placed after that date and rated A-9 on a PD-1-A or PD-3-A form. Manufacture of other than standard models is forbidden.

• **Machine Tools**—All machine tool production must conform in electrical specifications to the American War Standard Machine Tool Electrical Standards C74-1942, according to L-147. Exception is made for government orders and cases approved by WPB.

Amendment of Schedule 67 permits machine tool makers to file petitions with OPA for price increases.

• **Textiles**—Methods of pricing grease wool deliveries under futures contracts are established by Amendment 6 of Schedule 58. . . . Specific ceiling prices are named for terry towels, cotton blankets, corduroys, and other fabrics in Amendment 6 of Regulation 118. . . . Clothes for young boys and linings of fur coats are included in L-85 by an amendment. . . . Producers of combed grey cotton goods not under Schedule 11 need no longer make monthly reports to OPA.

• **Food**—Amendment of Regulation 152 provides a price ceiling formula for canners who sell prepaid freight, freight allowed, or delivered price basis. . . . Premiums on small sales of green coffee are cut from 7½% to 3% and other changes are made by amendment 2 of schedule 50.

• **Steel**—Amendment of M-126 forbids the use of steel after Aug. 12 in a long additional list of civilian goods. . . . Tin orterne plate in process May 16 and roofing, furnace pipe, and fittings in inventory on that date may be used for repairs without a rating, by amendment of M-21-e, and also for defense housing.

• **Other Metals**—Controls over antimony are relaxed, by amendment of M-112, to encourage its substitution for Tin. . . . Smelters and refiners of nonferrous metals operating under P-73 may continue to do so through the third quarter instead of using PRP. . . . Amendment of Schedule 20 reduces the ceiling prices on 13 classifications of copper alloy scrap.

• **Wood**—Longleaf yellow pine lumber is subjected to ceiling prices at about March levels, and items of shortleaf not already covered by schedule 19 are priced at Oct. 1-15 levels by amendment of Schedule 19.

Amendment of Regulation 26 permits completion at higher than ceiling prices of existing contracts to deliver aircraft fir to military and lend-lease buyers. Also, until Sept. 10, sellers may make and fill contracts at above ceiling prices pending OPA action on applications to exceed the ceiling.

Amendment of Regulation 161 permits use of full ceiling prices for Sitka spruce logs regardless of delivery point.

Seasonal veneer containers produced in the "Western area" have been brought under the provisions of Regulation 160.

• **Rubber**—Amendment 8 of M-15-b-1 revises the specifications for use of rubber in insulated wire and cable and makes them applicable to military orders.

• **Chain Stores**—Procedure by which chain stores regularly following a uniform-price policy may continue to do so under GMPR is established in Amendment 12.

• **Government Contracts**—The rapid procedure for appeals from price ceilings under GMPR which was set out in OPA procedural Regulation 6 is made available for sales to this or lend-lease governments under any price ceiling by Supplementary Order 9.

• **Liquidation**—Sales under court order are exempt from GMPR (Supplementary Order 10).

• **Sugar Rationing**—Amendment 5 to the sugar rationing regulations permits rationing boards to replace lost ration books without waiting two months. Consumers in remote areas are permitted to buy up to 12 pounds at a time as an advance on regular rations. Toll processing of sugar for industrial consumers is also permitted.

• **Other Priority Actions**—Production during July-October of metal plastering basis is cut to a total of 9,250 tons by Amendment of L-59. . . . Amendment of M-152 provides a simplified procedure for small purchases of arsenic. . . . Deadline for military sales of metal shelving is extended to Aug. 1 by amendment of L-13-a. . . . Silk woven or knitted before June 13 may still be made into church goods under L-136. . . . Manufacturers of portable lamps and lamp shades are permitted, by amendment of L-33, to use up existing stocks of fabricated metal, cord, and silk. . . . The copper order (M-9-c) has been amended to permit manufacture for the services of binoculars and ship valves. . . . Amendment of M-26 restricts processing and sale of silk waste and reclaimed silk fibers to that for use by the services. . . . Xylol and xylol base aromatics derived from coal tar are subjected to the controls of M-150. . . . Amendment of P-58 grants higher ratings to deliveries to South American copper mines. . . . Aniline was brought under allocation by M-184. . . . Manufacturers of venetian blinds may continue to assemble fabricated metal parts on hand Mar. 20.

• **Other Price Actions**—Regulation 180 permits prices of chrome yellow, chrome green, molybdate orange, and zinc yellow pigments (reduced by GMPR) to rise to Apr. 1 levels. . . . Regulation 179 rolls back the prices of natural and synthetic pine oils to the levels of last October. . . . Sales of industrial diamonds are made subject to GMPR by Amendment 13. . . . Nonprofit sales of articles manufactured by the blind are exempt from GMPR by Amendment 14. . . . Sales in the Canal Zone are exempted, by Supplementary Order 8, from all OPA orders.



A MOUNTAIN OF BAUXITE FROM WHICH ALUMINUM IS PRODUCED

THE MOUNTAIN THAT WILL FLY TO TOKYO

General Doolittle, we salute you! We pledge to you that mountain after mountain of "Flying Metal" will pour out of our plants and head for Tokyo. Believing that the war will be won or lost in the air, our workers have long been on a 24-hour schedule, 7 days a week, to produce more tons of "Flying Metal" a year than France and England together produced before this war. We gladly mortgaged our future to achieve it.



REYNOLDS METALS COMPANY

Manufacturers of Aluminum for Every Purpose

GENERAL OFFICES • RICHMOND, VA.

WE WERE READY WHEN THE
CHALLENGE CAME • VICTORY
WILL NOT FIND US UNPREPARED

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GENERATIONS of skilled Yankee workmen have prepared Maine to meet the present production emergency. Manufacturers who have only thought of Maine as No. 1 vacation land will be amazed at the Maine industrial story.

"Industrial Maine" has been compiled and printed under state guidance to give an accurate, all-inclusive picture of the industrial resources of the Pine Tree State.

It covers all important phases of production and distribution. Friendly labor. Economical power. Fast transportation—overnight to the major markets of the country. Favorable taxes. Available resources. Many others.

Maine combines industrial advantages which cannot be matched anywhere in the country. Write for free book. Address the Maine Development Commission, Room 7-B, State House, Augusta, Maine.



has not had occasion to show its hand: The only two cases that have come before it were thrown out on technical grounds. Its present intention, however, is to hold fairly rigidly to the July 1 base, yielding only in the case of rates which were established more than a year ago and in cases where local conditions have changed—as by the introduction of a huge job into some small community where the rates are too low to attract labor.

An important point is the effect of the board's policy on union organization. In areas where nonunion conditions prevail, the July 1 rate would be the nonunion rate. If however, a union organizes the area, the board is prepared to recognize this as a change in conditions justifying a readjustment. Thus unorganized workers can get a raise if, and only if, they join a union.

• **Process of Bulwarking**—This point illustrates the key element in A.F.L. building trades' policy for the past year. The building trades department has been devoting its primary efforts to putting itself in a strong position in the industry rather than to getting the highest possible wages that could be squeezed out of the war situation.

Thus a year ago, the building trades entered into an OPM-sponsored agreement waiving double time for overtime and providing that wage rates in effect at the beginning of a job should remain in effect throughout. In return, they obtained recognition of union pay scales on the new isolated war plant projects and virtual exclusion of the C.I.O. from the industry.

• **Closed Shop Extended**—Officials well remember how their unions were nearly wrecked when, after the last war, they were stuck with rates too high to maintain. So they are following a policy which is rapidly making construction—above the level of housebuilding—a 100% closed shop industry.

Such a wage policy, naturally not too popular with the rank and file, would not be possible in unions lacking the strong internal discipline of the construction trades. It is made easier, too, by the fact that construction's hourly rates are based on intermittent employment. When employment is fairly steady, as now, and there is lots of overtime, they produce a very satisfactory income.

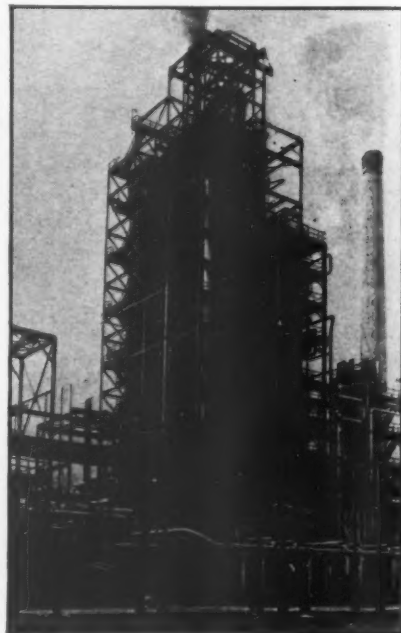
• **Complications**—That all is not serene on the construction front, despite stabilization, has been emphasized by developments in Pittsburgh (page 84) and New York. The New York situation, productive of a strike vote this week which threatened to tie up \$100,000,000 worth of naval construction, turns upon the employment of WPA workers on one job, described by Navy sources as a regular WPA undertaking. Building trades unionists set forth that the wages paid the WPA are below prevailing rates.

Auto Fabric Sale

Several million yards of materials left over from motor manufacture are put on market. WPB establishes display.

Broadcloth purchased for automobile seat cushions may wind up on the backs of civilian defense volunteers as uniforms.

When automobile production was shut down several months ago, manufacturers were caught with several million yards of materials, including whipcords, broadcloths, plaids, velour finishes, striped weaves and even some rubber-backed materials, as well as small quantities of special leathers adaptable to upholstery use and substantial amounts of hair carpet. Detroit has now put these stocks up for sale, and the War Production Board is helping to move them. A complete display of swatches of the materials, accompanied by quantity specifications and prices, has been set up in offices of WPB's Textile and Apparel Branch, Railroad Retirement Building. Originally, the



"CAT" CRACKER

As high as a 20-story building is the new fluid catalytic cracking unit (BW—May 13 '42, p30) which has just been placed in operation by the Standard Oil Co. of N. J. Thirty similar units are now under construction throughout the country, and will make both 100-octane aviation gasoline and raw material for synthetic rubber.

One-eighth inch cable pulls up *2000 horses!*

Slender cords of stranded steel wire connect the pilot's control stick with the tail flippers . . . stand the strain of pulling out of a power dive. Sometimes the pilot passes out under the pressure, but the control cables can't! . . . These thin cables escape even concentrated bullet bursts, bring many a shot-sieved ship safe home.

Plane controls call for the finest, lightest, toughest wire ropes . . . and Rochester is proud to supply many of the leading makers of aircraft today! . . . Elsewhere all over the world, Rochester Wire Ropes are doing today's hard, crucial jobs.

Precision manufacture, long experience—and a good name to live up to—make the name Rochester in wire ropes worth remembering . . . for the day when our output is no longer needed for war production.

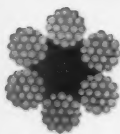
ROCHESTER *Ropes*

JAMAICA, NEW YORK • CULPEPER, VIRGINIA



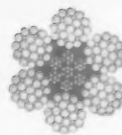
CONSERVE YOUR CABLES

Wire rope is precious now! Take proper care of what you have!

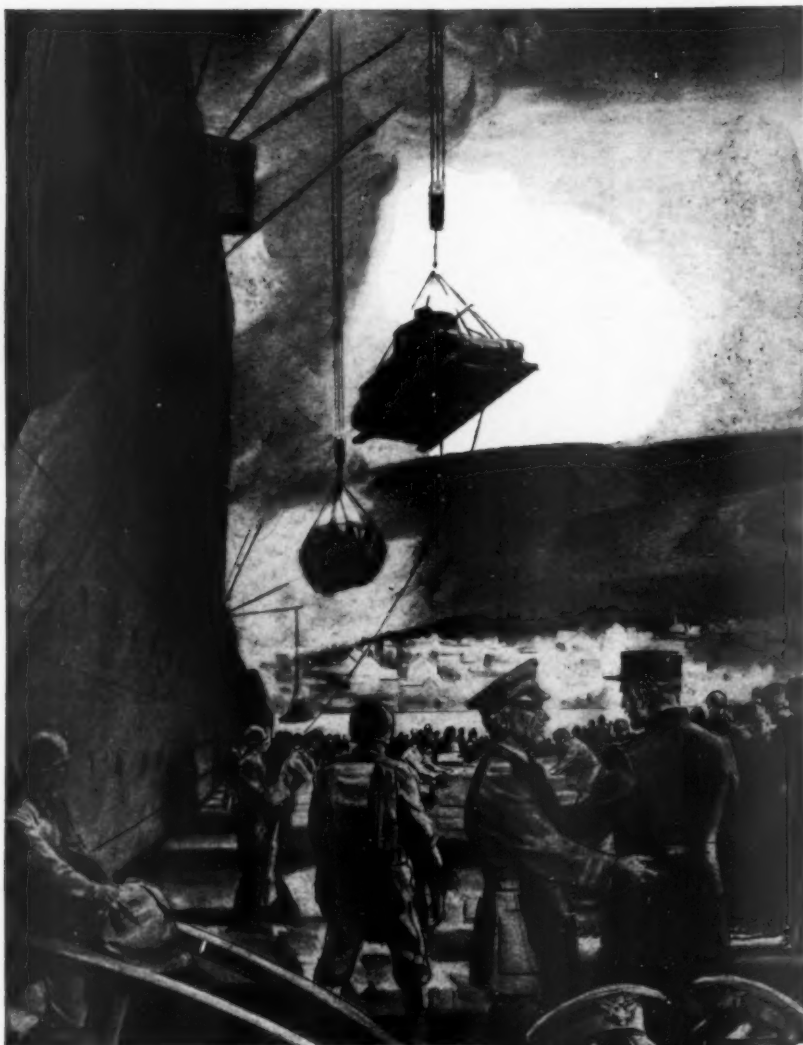


AVOID OVERLOAD—

which causes premature fatigue of wire rope. No wire rope is available today for private industry . . . only for government service and high priority industrial requirements.



Cable conservation will be treated technically in another advertisement, soon.



Starts with a letter . . .

and doesn't start until the last letter is sent! Late mail—orders, specifications, bills of lading, parts and pieces—slows up production, shipping, troop movements, victory! . . . This is certainly the day of the Postage Meter, which speeds up mailing . . . prints postage, seals envelopes, handles parcel post, saves time and effort in the office; and speeds up mail . . . saving three operations in the post-office, starts mail on its way sooner! . . . Make the most of *Metered Mail* . . . mail early and often . . . to help the Postal Service help you!



Pitney-Bowes POSTAGE METER CO.

Branches in principal cities. Cf. phone directory.
In Canada: Canadian Postage Meters, Ltd
1447 Pacific St., Stamford, Conn.

companies had planned to carry the materials through the war period. Much had been wrapped and moth-proofed, and is at present in warehouse. Manufacturers were not inclined to sell the goods at first, because they were afraid of losing money and feared that their unfamiliarity with the textile market might lead to serious trade jams. Now, however, mounting carrying charges dictate the advisability of sale.

Prices which are being quoted, some of them running up to \$5 a yard, represent cost plus expenses incurred in routine handling. Inasmuch as the auto companies feel they will be able to preserve the materials satisfactorily through the war period, they are not generally disposed to offer "bargain cleanout" prices, hope to realize as much as \$5,000,000 out of the sale. They point out that by selling simply at cost they will be passing along to buyers the price advantages they were able to obtain from the mills as huge volume purchasers and at the same time sidestep any possible trouble with OPA's General Maximum Price Regulation.

The auto concerns are hopeful that cloak and suit makers may be able to utilize bulk quantities of the goods to make uniforms for civilian defense volunteers, men or women. A good share of the material, they said, might be employed as uniforms for the regular armed forces as well. Some is regarded as usable, as is, for civilian dress coatings and suitings. Other materials are priced so low that purchasers may very easily afford the expense of refinishing and redyeing.

Some interest was reported from Washington in the display by purchasing agents of shoe companies, handbag makers, milliners and home furnishers, as well as dress, uniform, and clothing houses. The novelty of finding surplus goods in an era of scarcity, rationing and allocations was enough by itself to stir up a trip to the exhibit, regardless of intentions of buying.

ON MAGNESIUM FIRES

Not falling incendiary bombs, but flare-ups in aircraft factories are providing the U. S. with most of its experience with magnesium fires, Underwriters Laboratories, Chicago specialists in fire prevention and control, declared last week.

Workmen who know that solid pieces of magnesium alloy will not ignite are not always aware that shavings and particles flare up easily, and that water will not put them out. Consequently Underwriters Laboratories recommends that scrap be kept in cans and gotten out of factories promptly. Three extinguishers have been approved, G1, produced by Dow Chemical Co., Midland, Mich., and sold by Pyrene Mfg. Co., Newark; duMag, made by Ansul Chem-

ical Co., Marinette, Wis., and distributed by Dugas Engineering Corp., Chicago, and Mx fire extinguishing granules, offered by the Philip Carey Mfg. Co., Cincinnati.

Devices made solely for putting out magnesium bombs are not accepted for testing by Underwriters, who maintain it does no good to concentrate on the bomb and allow the building to burn.

Spices Hold Out

Packers will have some headaches and substitutions will be necessary, but average table won't be much affected.

Home-made kummel is out for the duration but mustard plasters will stick. Meat packers and makers of spiced sauce and catsup get one more headache, extremely touchy epicures may be disgruntled, but housewives will hardly notice the change. That, in brief, is the spice situation two years after central European supplies and a few months after East Indies sources were cut off.

• **National Significance**—Although in a good year our total spice imports used to be little more than 50,000 tons, the presence or absence of seasoning in food is so important that complete absence of the spices would turn the national stomach. Happily, we can make out. Boosted domestic production, plus new crops, substitutes, and small amounts tucked away in bottoms that are still making the Far Eastern runs will keep the spice shortage from getting too hot.

The War Production Board has put about the same distributive brakes on leading spices that were imposed on coffee, tea and cocoa, largely to stabilize trade and prevent top-heavy accumulations of stock.

• **Black Pepper**—Most important in the spice list is black pepper from the East Indies, but greatly expanded imports in the last three years have laid a larger than normal supply in warehouses here, and we could stretch along for at least two years, probably longer, with present supplies. White pepper may have to go, since it is merely ripened, bleached black, and has less vigor.

The second spice import item is also a trouble-free one, mustard. Last year for the first time mustard growers of the Pacific Coast, Montana, and North Dakota produced more than half domestic needs, and will have no difficulty growing so much more than an actual surplus of mustard produced domestically is a possibility. The domestic top dressing for ham, moreover, is indistinguishable from the foreign to most spreaders of prepared mustard.

• **Cinnamon and Cassia**—There is about one year's supply of cinnamon and cas-

ACCURATE CORES

Speed Production of Precision Castings



★ Speed is all important these days ... but so is accuracy. You'll get both in cored castings by National.

Special formulas for core sand and core spray have been developed over a period of 30 years to take care of each requirement.

Skilled foundrymen mix these formulas under laboratory control in machines especially designed for this purpose.

Production cores are "blown" and core dryers used whenever possible to insure accuracy and increase production.

Cores are baked properly in the latest type of thermostatically controlled ovens, insuring cores of proper texture for every different type of casting.

National's skilled men, expert supervision, good materials, modern machinery, give you accurate cores which speed the production of precision castings.

Quality

SAND AND PERMANENT
MOLD ALUMINUM CASTINGS



THE National BRONZE & ALUMINUM FOUNDRY CO.

Twin Plants, CLEVELAND, OHIO

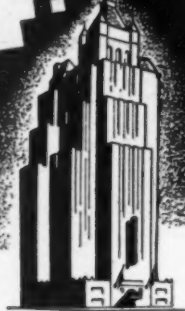
NEW YORK — 111 Broadway

CHICAGO — 188 N. Dearborn

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LOS ANGELES — 402 S. Hill

NO SHORTAGE OF
\$4.⁰⁰ ROOMS



Today at The Lexington you can still ask for and invariably get accommodations at the minimum rate! More than one-half the rooms in the entire hotel are, now as before, priced at \$4—all outside with combination tub and shower, circulating ice-water, full-length mirror and four-station radio. Home of the famous Hawaiian Room.

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SO MUCH
for So Little



The most durable L. L. Brown ledger, instead of ordinary paper, increases accounting costs only 1/4 of 1%, yet guarantees 100% protection—utmost resistance to wear. Your printer will be glad to furnish you with L. L. Brown papers.

**L. L. BROWN
LEDGER Paper**

MILLS AT ADAMS, MASS.

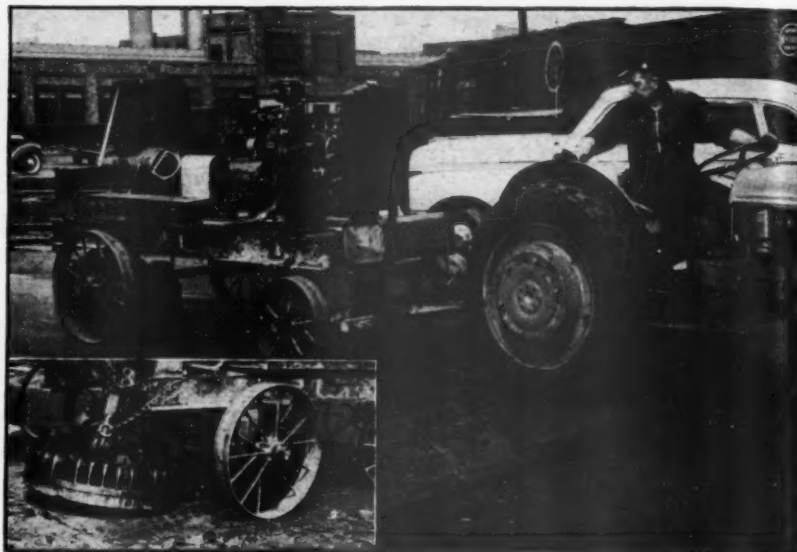
ESTABLISHED 1849

sia (Chinese cinnamon more familiar to most than the real cinnamon), and when that is gone we will have to depend on South America and the West Indies, a thinner source. Cloves are currently in good supply and may continue so, shipping from East Africa and Madagascar permitting.

Top price dislocation occurred in sage, which made a neat run from 16¢ to \$1.65 a pound in the last year, but

southern European sage is already being displaced by domestic sage (principally Missouri), and Mexican oregano, which is sufficiently similar to get by. The sage market is so cleaned at the moment, however, that sausage makers are reaching the last of their stocks this summer. The Army may have to revise its specifications for pure sage in meat dressings and take oregano like the rest of us.

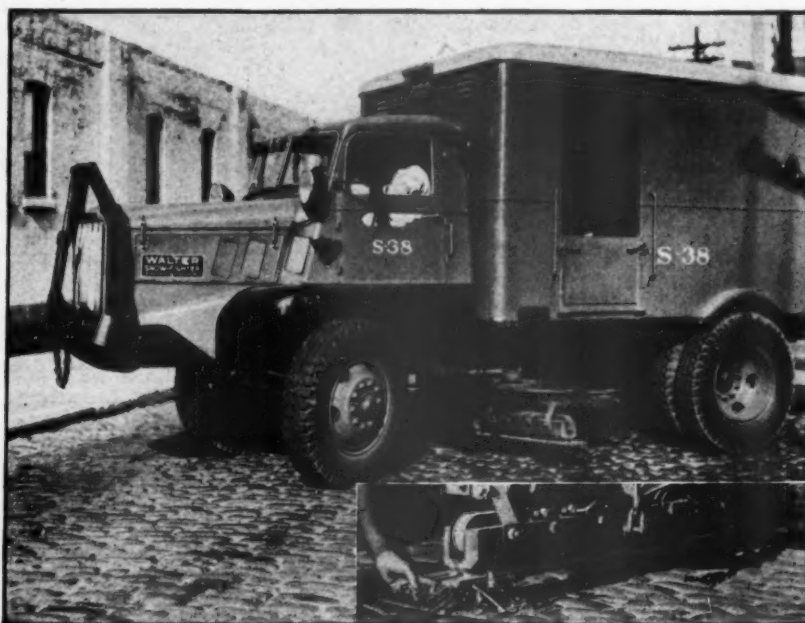
• Nutmeg and Mace—Nutmeg can be



SCRAP SWEEPERS

Two different portable magnet outfits—one (above) at the Studebaker plant in South Bend, Ind., and the other operated along the bus routes of the Philadelphia Transportation Co.—are playing important roles in the nation's rubber conservation drive by remov-

ing the causes of punctures. Studebaker's rig was originally conceived as a scrap scavenger to operate in the plant yard, but it has virtually eliminated punctures in that area. Both Studebaker's and PTC's outfits were built from spare parts in company shops. In a test run the latter gleaned 10 pounds of metal in a two-mile trip.





HELPS TO MOVE THINGS *Faster*

For Victory—time is priceless.

Industrial Trucks—Built to stand up under the heaviest day-in and day-out usage. A wide variety of standard models in hand trucks, platform trucks and box trucks is produced by Colson.



Colson Lift Jack Systems—For rapid, economical handling of all kinds of material in storage or through manufacturing processes. Equipment that soon pays for itself in time and labor saving.

To save time, use Colson equipment for handling raw materials, goods-in-process, and finished products swiftly and safely.

Today, we can serve normal channels of trade only after war requirements are fully satisfied. But we are doing our best to take care of the needs of those engaged in Production for Victory.



Universal Drum Trucks—Handling barrels and drums is no problem to those who use this equipment. Instant adjustment grips any drum or barrel 24" to 40" in height. All-steel, welded construction.



Casters for Every Purpose

—The complete line of Colson casters offers a style and size to meet every need, from furniture casters to castor wheels that will carry loads up to 1500 pounds per castor.

ELYRIA,
Offices and Agencies

Casters • Industrial Trucks and Platforms • Lift Jack Systems • Bicycles • Children's Vehicles



OHIO
in Principal Cities

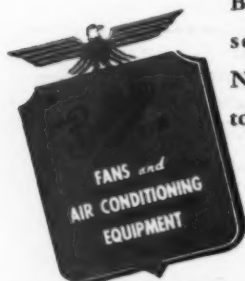
Wheel Chairs • Wheel Stretchers • Inhalators • Tray Trucks • Dish Trucks • Instrument Tables



WATCHDOGS OF THE DEEP

Down in the hulls of many of Uncle Sam's men of war, Buffalo ventilating fans are delivering fresh, clean, "breathable" air to the crew—in combat and out! Here is a task that calls for uncompromising dependability—and Buffalo Fans accept the responsibility, not only supplying unfailing ventilation, but operating with that extreme quietness required by Navy specifications.

Here, as in many other ways, Buffalo is ably serving our Nation's Victory program.



BUFFALO FORGE COMPANY
438 BROADWAY BUFFALO, NEW YORK

Branch Engineering Offices in Principal Cities
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

had from the British West Indies as long as shipping transport permits, and the thinner West Indian production holds out, but mace, ground from the nutmeg's outer hull, is not to be had. West Indian nutmeg quality is not as good as that from the Far East. Jamaica ginger will serve all ginger needs, and allspice, which can pinch hit for several seasonings, is another one obtainable in ample quantities from the Caribbean.

Lesser spices are in much the same general case as the leading half dozen—pepper, mustard, cinnamon, nutmeg, cloves and ginger. Either there is a good supply here or the spices can be obtained from sources still open, or as a final choice, substitutes will serve.

• **Committee Is Busy**—The shortage is acute enough and the spice price list high enough, however, to send a committee of the Spice Trade Assn. scurrying for new sources. Chairman John A. Sokol of the production committee has covered South America within the last few months to spur cultivation and the gathering of wild spice by the good neighbors.

At home, practically every agricultural experiment station in the country has spice projects under way, particularly in the South. The Lower Rio Grande Valley, for example, can produce a number of the tropical spices.

• **Louisiana's Contribution**—Louisiana already has a pepper pot around Opelousas (where paprika was introduced in 1939) and now promises 1,000,000 lb. for 1942. Bulliard's Evangeline plant at St. Martinville has a hot seasoning list which might be tamed down to help less flinty northern palates, and at Avery Island, La., McIlhenny's copyrighted Tabasco is produced directly atop a salt mine.

About half of all spices are used by food processors, the other half bought by the pinch package from grocery shelves. Packing plant sausage may be a little milder later on, with black pepper specks instead of invisible white pepper in it. Sauces may mellow down a bit, but the home table is apt to be unchanged.

• **Some New Crops**—Owners of small farms who have large families to supply the necessary hand labor will find an opportunity in the shutoff of imports. Mr. Sokol proved during the World War that many seeds and herbs grow satisfactorily here.

Right now the country needs 4,500 tons of poppy seed a year. An acre yields anywhere from 500 lb. to 1,000 lb., and the seed brings as much as 25¢ a lb. There also is substantial demand for caraway, coriander, dill, celery, sage, marjoram, and paprika at prices ranging from 8¢ to 60¢ a lb.

• **Legislative Fight**—The spice association is busy battling a bill introduced by Senator George on behalf of the U. S. Bureau of Narcotics. This would pro-

hibit the growing of poppy seed. Mr. Sokol maintains, however, that the seed of the blue poppy used for food contains only a trace of opium, has been grown in European lands for generations without being used as a source of the drug.

Commercial opium, he adds, comes from the latex of the white poppy plant. Prohibitions against the raising of the blue, the Spice Trade Association insists, would simply destroy an opportunity for raising the needed supply at a profit without serving any useful purpose.

Retake for War

Hollywood, after adjusting to WPB order on sets, now faces necessity of reducing sharply its consumption of film.

Hollywood, doing some fast scene shifting these days, is beginning to question its own belief that war was something the movie industry could take in its stride. The worrying started, of course, with the War Production Board's order of May 6 that not more than \$5,000 worth of new materials could be used for sets in any one picture. It reached something of a climax early this month when movie executives tried to work out a voluntary plan for curtailing raw film consumption to meet WPB requirements.

• **Efforts to Conserve**—Film curtailment programs so far submitted apparently haven't been drastic enough to suit WPB officials, but industry leaders said last week they would continue their efforts until demands are met.

Elimination of all rehearsals with film, use of single takes for rushes, use of stills instead of films for wardrobe and similar tests, limitation of script revisions on sets, elimination of the reprinting of approved takes and use of single takes for rushes, have all resulted in a considerable savings. Nevertheless, the cuts will have to be far more drastic if the original WPB intimation of a 50% cut in film is to be met.

• **Distribution Problem**—Chief stumbling block seems to be that any substantial curtailment of film involves not only cutting of studio use, but a limit in number of prints used in distribution; a touchy subject of discussion for the movie executives.

Importance of reducing the number of prints in distribution may be seen from the fact that it uses up about 16½ times as much film as production. In the West, film consumption has been reduced about 30% on a voluntary basis. In the East, distributors are attempting to get together on a 25% cut but have not yet agreed on the method although,



Between You and the Rising Sun

You are looking at a silhouette that is fast becoming a legend . . . the majestic sweep of the dorsal fin of the Boeing Flying Fortress* . . . known in many skies . . . spoken of in many languages.

It is one of the reasons why the Fortress is so precise and deadly in action . . . why it casts such a long shadow over the hopes of the Axis nations.

The engineers of the Boeing aerodynamics division who designed this tail surface were seeking greater directional stability than any airplane ever had. And they worked until they found it.

An airplane with stability flies smoothly and certainly on a given course.

Whether the pilot is flying "hands on" or "hands off" the controls, the plane does not "hunt"; it does not "yaw," or veer from side to side.

The Boeing fin and rudder combination provides straight, smooth sailing for Boeing Stratoliners,* and it helps the men in the Flying Fortresses to fly true to the mark, delivering their messages on time and on the button.

But this is only half the story. For the big Boeing fin also helps to control trouble when trouble strikes in combat. Even if an engine is put out of commission . . . even with the rudder controls completely shot away, the Flying Fortress

is still under control, able to fly on course safely and swiftly.

When a big Boeing bomber comes over an objective it rarely misses the mark. The enemy knows this. He has come to know the Flying Fortress well, and to recognize its tall and tapered fin for what it is — a symbol of one of the most powerful flying weapons in the arsenal of democracy.

• • •

The continued advance in aerodynamic design . . . both for war and for peace . . . is only one of the many different projects that form a constant part of the Boeing engineering schedule.

DESIGNERS OF THE FLYING FORTRESS • THE STRATOLINER • PAN AMERICAN CLIPPERS

BOEING

* THE TERMS "FLYING FORTRESS" AND "STRATOLINER" ARE REGISTERED BOEING TRADE-MARKS

THIS

Saboteur

HELPED MAKE
THIS RECORD
LAST YEAR

HEAT-FAG

WORK ACCIDENTS

14,000 DEATHS

1,400,000 INJURIES

Cost to Industry

\$700,000,000

HEAT-FAG, the unseen saboteur—the enemy of production—strikes at workers who sweat. In sweating, vitally needed salt is lost from men's bodies. They become inalert—fatigued—careless—make mistakes. Lowered efficiency sets in—costly accidents can easily happen. And, priceless man-hours are lost.

AVOID HEAT-FAG—USE MORTON'S SALT TABLETS

This is how a Morton Salt Tablet looks when magnified. Quick dissolving (less than 30 seconds).



Case of 3000
10-grain
salt tablets
\$2.60

Salt-Dextrose Tablets, case of 3000 \$3.15

Morton's Dispensers
500-tablet size - \$3.25
1000-tablet size - \$4.00

ORDER NOW
Order from your distributor — or directly from this advertisement.

FREE Sample Tube

Write — on your firm letterhead — for a pocket size sample tube of Morton's Salt Tablets and for the new folder — "Heat-Fag and Accidents Ride Together."

MORTON SALT CO., Chicago, Illinois

EVERYONE WHO SWEATS NEEDS SALT



IT AIN'T HAY

Converted hay-baling machines are proving an aid in the reclamation program at the Caterpillar Tractor Co.,

Peoria. Motor drives and side-loading hoppers represent special equipment on the baling machines which pack and bind up to 40 tons of paper a month.

individually, they are now curtailing by perhaps 20%.

• **Different Running Speed**—Last week, Hollywood engineers threw in a suggestion for slowing down projection from 90 to about 67 ft. of film per minute with a saving of about 500,000,000 ft. of film annually. This would mean a change in sprockets of projectors both at the studios and in theaters, and would result in a new type of film.

Big handicap in the plan is that films already produced couldn't be used on the altered projectors and the change-over would be hard to make without disorganization of theater operation and studio production.

In order to save film used in retakes of a scene, Kenneth Thomson, executive secretary of the Screen Actors Guild, recently suggested to producers that: (1) more time be used for rehearsals; (2) studios set up nearby each stage a temporary rehearsal room where rehearsals can continue while shooting and other mechanical operations are in progress; (3) small part (bit) players be called for one or two hours before needed so they can familiarize themselves with the set and with the action involved in their scene.

• **No Photos of Stars**—And, as another illustration of war's relentlessness, add the fact that the millions of signed photos of stars, used by Hollywood as promotion, will soon be no more because of a pinch in printing paper and chemicals.

The picture industry's spokesmen want it distinctly understood that they are "meeting all the rules," but they also insist that their business is different.

• **Their Side of It**—They set forth, for example, that they should be allowed to show where and why the \$5,000 decree might be modified to fit special condi-

tions. They also say that, inasmuch as the industry has been saving on critical materials since shortages first threatened, they would like permission to retain moderate amounts of saved materials, turning the rest over to the government.

Cost of sets varies normally from a few hundred dollars to hundreds of thousands. Materials account for 25%; the rest is labor. Since the decree applies only to new materials purchased, studios can use reclaimed materials and exchange them with one another. Hollywood already has a healthy lend-lease system of its own in operation.

• **Conservation Measures**—A big studio will buy several hundred carloads of lumber yearly, several thousand kegs of nails, tons of paint, reinforcing steel, rope, and solvents. Lumber is being used over and over. Moreover, its use is being held to a minimum by fooling the camera with sets of canvas, painted to resemble wood. Such sets are more fragile, and so signs are put up to remind employees of that fact; also to remind them that saving materials prolongs jobs.

Nails are a big headache right now. The 8 and 18 penny sizes, most used in construction of cantonments and war plants, are now unobtainable for sets. Formerly sold for scrap, the picture industry's used nails are now straightened out and used again. One studio is working on a nail-sorting machine and a straightening machine, with a fair prospect of success although there are still lots of bugs.

• **Where Pinch Is Felt**—Aluminum and metal powder to make wood look like metal are "out" and sadly missed. Many paint materials are missing including certain kinds for actors' makeup. Sisa



"So you're one
of those **Wise Guy**
College Boys, *Eh?*"

THE NOTE I got from Mr. Larson—the G.M.—was brief. "A man in your department, named George Mathews, has a suggestion for increasing output that sounds good. Ask him about it, then see me."

I got mad. What's this guy's idea—going to the big boss with suggestions? Why didn't he see me first? That's why I made the "college boy" crack when Mathews came in.

But the youngster spoke right up when I asked him to explain himself. "It was like this, sir. Mr. Larson gave me a lift to the bus line. He asked me how things were going here. I told him *swell*, but that it was plenty *noisy* and that sound-conditioning might step-up production.

"You see, sir, I learned quite a bit about sound-conditioning in college. It's been used in offices for a number of years, and a big insurance company proved it increased efficiency about 10%. Now factories are using it, too. That's all I told Mr. Larson. . . . Guess he got my name off my identification badge."

With that, Mathews went back to work. But next noon he was in my office with a lot of data on sound-conditioning and its effect on efficiency. He had proof that you just couldn't laugh off. The result was we both went to the G.M. and had a talk about it.

It's two months since we had this place sound-conditioned. We picked the Celotex people to do the work because they've had the most experience. They did a swell job, too. The reduction in noise is remarkable. The work isn't as fatiguing. The shop runs smoother. The men are happier. When someone finds it necessary to talk, he can be heard. As for increasing efficiency—there's no doubt about it!

Celotex Sound-Conditioning is serving with distinction in war industry and on other important "home fronts"—contributing to increased efficiency, better hearing and comfort—in factories, offices, churches, hospitals and schools. And even today, you can get it without a priority order.

Without obligation, the Celotex Sound-Conditioning representative in your territory will make a survey of your problem. He'll tell you what sound-conditioning can accomplish for you and what it will cost. A note on your letterhead will bring him to your desk.

FREE! Learn how Celotex Sound-Conditioning is increasing efficiency, cutting costs in factories and offices all over America. Actual case records. Write for "The Quiet Forum." Free on request. The Celotex Corporation, Chicago, Illinois.

CELOTEX

SOUND CONDITIONING

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THE CELOTEX CORPORATION • CHICAGO



HERE'S YOUR COMPETITION TODAY

The ENEMY is our competition today. Our competitors are Germany, Japan and Italy. *And unless we lick that competition we will never again be free to compete with each other.*

We've got to meet this stiffest of competition on two fronts . . . the fighting front and the production front. Co-ordination of the highest order must be applied to the job.

To back up our men who will do the real fighting, we must make maximum use of all essential materials and of every production facility which we have behind the lines.

We must use every man not needed in the fighting forces—and women, too. Older men, now retired, must come back to the job. We must use old machinery as well as new, small plants as well as large, 24 hours a day, seven days a week.

Remember, there's a shortage of time . . . we have no surplus of skill in management and labor . . . no surplus of materials. It will take *all* of these we have.

Geo. P. Trundle, Jr.

P. S. Today it's 100% war work for every consulting management engineer on our staff.

THE TRUNDLE ENGINEERING COMPANY

Consulting Management Engineering

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NEW YORK • Graybar Building • 420 Lexington Avenue

is 75% satisfactory for rope, not as strong as manila, more susceptible to water. Underwater scenes are "out" until substitutes can be developed for the rubber-covered cables that have been used. A lack of razors is a headache as hundreds of thousands are needed yearly in cutting film. Burlap, an all-purpose material, now is not to be had. So on clear down the sad critical list.

Rubber is now carefully rationed by studio executives. To save tires, players and extras go together in buses. Equipment hauls are made by rail wherever possible and every vehicle coming back must carry a load.

• **Skill and Talent Raided**—Film stories can be adapted to require fewer backgrounds. Miniature backgrounds can be used extensively as substitutes, taking moderate amounts of material and more high-priced labor. This, however, brings the producer into collision with another of the industry's problems—loss of skill and talent to the armed forces and to the war industries.

War not only reduces the number of available painters and carpenters but cuts into the ranks of the stars themselves. Draft and enlistment are making inroads into the 20–30 age group which has been the industry's main dependence for leading men and male stars. In addition, stars give much time out for war films, government radio programs, and personal appearances for war bond drives. Camera men are being taken to film actual combat. Directors have been called to Washington to advise on filming. Writers are busy on war scripts and propaganda.

Incidentally, there's one wartime break for picture producers: They have a new set of villains. Up to Pearl Harbor all foreign dastards were out, because film-buying countries threatened boycotts. Now, Japanese and Jerry villains promise to be popular in most countries for a long time to come. Of course, Japanese actors and extras have all been moved inland from Hollywood but to offset that, Chinese and Filipinos can be used to play Japanese villains, and with special devilishness because they relish the parts.

• **Qualified for War Jobs**—Basis for the transfer of the 1,200 film extras into war plants is the fact that the occupational record of the Screen Actors Guild's extra-player membership revealed that they had experience qualifying them for work in war industries. Past experience included work as engineers, carpenters, riveters, machinists, power machine operators, drivers, construction workers, welders, and switchboard operators.

The guild is granting war service status to transferred members, enabling them to resume motion picture employment when war work is terminated. Already more than 120 guild members have, on their own initiative, secured such withdrawals.

Loans or Stew

General Finance Corp., as its instalment line fades, lends to small war plants, and has even canned some beef stew.

With the hot breath of the draft making 17 out of every 20 small loan applicants poor risks (in general, a man has to have both wife and child to be considered for credit nowadays), and with automobile paper folding up like an accordion, finance companies are hard pressed to keep their money working.

• **One Company's Experience**—What happened when automobile business died on the vine last January is typified in General Finance Corp. of Chicago: 40% of its loans have been paid off and these funds are awaiting reinvestment, its automobile loans have shrunk from \$16,000,000 to \$9,000,000.

General has met this problem by switching its activities into banking war industries and companies turning out vital products—beef stew, dried eggs, motor boats, parachute hardware, bomb boosters, to name a few. Owen L. Coon, head of the company, originally founded a taxicab business, branched out into taxicab financing. Eventually, after cozying up to automobile buyers with such free services as touring advice, bail bonds, accident policies, and low insurance rates to preferred risks, he ended up in control of General. It holds sixth place in the automobile paper field, with net worth of \$5,300,000.

• **Doing the Job Right**—When Coon saw an opportunity to resume money-making, he took the chance. He knew he must have able engineering advice available for both the finance company and the borrower, and must have, right in the borrower's factory, a capable man to represent the finance company's interests. Also, he saw that he must personally get the feel of the borrower's business; accordingly, General has taken hold even to the extent of personally canning a batch of beef stew left in a borrower's kettles at quitting time.

Consequence of this policy is that by last week General had channeled \$1,200,000 of its capital into war production jobs; it had on hand so many applications that there was every prospect that this total would be several times larger just as soon as the management could give these the necessary attention.

• **Typical Case**—A 46-year-old midwestern concern that has been producing from 60 to 75 cream separators daily took a war contract for \$1,725,000 of bomb mechanisms. This order was good for \$51,000 from the Reconstruction Finance Corp., but this was not enough for the company whose net cur-



AIRPORTS... Thousands of tons of steel being saved in concrete airport runways today... through pavement designs which eliminate steel almost entirely. These runways provide the necessary plane carrying capacity with a minimum volume of material requiring minimum transportation.

Concrete
can help conserve steel
and transportation

The Portland Cement Association's technical staff is available to assist war construction designers and builders to:

Get adequate designs, using a minimum of steel—often no steel.

Reduce the burden on transportation facilities.

A storehouse of data, gathered through a quarter of a century of laboratory research and field study, is ready to help solve concrete war construction problems. Recent developments in design greatly reduce or eliminate the need for steel in pavements and many

structures. Improved structural designs often reduce concrete quantities without lessening strength, serviceability or hazard protection.

Because the bulk of concrete material is usually available locally, the burden on transportation is reduced.

Our specially trained staff of technicians is ready to aid engineers, architects and contractors to get the maximum service which concrete can render on war construction.

PORTLAND CEMENT ASSOCIATION

Dept. 7d-12, 33 W. Grand Ave., Chicago, Ill.



Many types of war construction jobs

are being expedited by concrete methods which provide maximum structural strength with minimum steel and material transportation.



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WAR
SAVINGS
BONDS
★

NORTH CAROLINA . . . A VAST STOREHOUSE OF THE BASIC MATERIALS OF WAR



MAGNESIUM

The largest known reserves of magnesium in the world—more than a billion tons of olivine running 27% magnesium and containing in addition substantial amounts of nickel, chromite, and vermiculite. Deposits containing from 5,000,000 to more than 100,000,000 tons convenient to rail transportation.

IRON

One well surveyed area contains 6,000,000 tons of iron ore suitable for sponge iron manufacturing. Four deposits in one county contain (above stream level) more than 800,000 tons of high grade ore, some of it running 60% metallic iron and from 2½% to 17½% manganese.

MANGANESE

Deposits running from 100,000 tons to millions of tons and containing 10% to 30% manganese ore. Some ore bodies 300 feet thick and extend for miles.

COPPER

Extensive ore bodies from 8 to 45 feet wide and running 4% to 12% depending upon locality.

All of the above ores lie close to the surface, some of them being mined by surface operations.

VERMICULITE

This natural light-weight aggregate for concrete is found in unlimited quantities.

THESE and other basic materials so badly needed now for America's all-out War Effort are found in great quantity in North Carolina. Here, too, are the facilities for processing these materials. North Carolina has power available for war production. Abundant labor supply—loyal, efficient, American-born workers. In North Carolina are plant facilities immediately available for war production. North Carolina's strategic location—outside the congested



J. Melville Broughton
GOVERNOR OF NORTH CAROLINA

areas, yet close to the major Industrial Centers, offers opportunity for relieving the bottle-necks of transportation. Climate is a helpful partner to efficient production.

Put the mighty resources of North Carolina to work in your operation. Telephone, telegraph, or write for detailed information. Address: Industrial Division, 2990 Department of Conservation and Development, Raleigh, N. C.

NORTH CAROLINA

rent assets were placed at only \$143,000.

General Finance Corp. sent out management engineers to check, supplied some industrial management counsel, and agreed to lend up to \$300,000 for working capital. The deal was a 50-50 split on profits before taxes.

• **Basic Requirements**—To hold to a minimum the risk involved in entering unfamiliar fields, General limits itself to firms meeting three basic requirements: (1) The plant management must be able, (2) the firm must require little additional capital for plant and equipment, and (3) products must have short processing periods (not over five days) and wide production tolerances so as to reduce danger of losses from rejections.

More Train Seats

Most roads will reserve club, lounge, and observation car space after they sell out their regular accommodations.

Railroads are pushing ahead with their plans to accommodate the rush of travelers (BW—Jun. 13 '42, p. 26) and, at the same time, to conserve equipment by selling space in club, lounge, cafe, and observation cars. At the same time, there is less talk about trying to sell all the space that heretofore has been in the nonrevenue category.

• **Who Gets the Space**—Most roads now are numbering the seats in the so-called luxury cars (railroads don't like that name because they think it has been used by Administration spokesmen as an epithet) and selling them as regular accommodations. In the special all-coach trains, these are sold on coach tickets, but in most cases, where the use of the cars is more or less confined to Pullman and parlor car passengers, the space is sold at regular parlor car rates. Combination Pullman-lounge cars that can sleep fewer than eight people will be converted to all-seat if equipment can be obtained. Otherwise, they are likely to be sidetracked for the duration.

The roads are trying, nevertheless, to give passengers the services to which they have become accustomed. The nonrevenue seats will not be sold unless and until all regular seats on the train have been reserved. Some care will undoubtedly be exercised to avoid selling seats in cafe-lounge cars, for instance, to families with small children who would neither be comfortable nor add to the comfort of other passengers.

• **Fewer Dining Cars**—Curtailed of dining car service is still in the talk stage. Most likely innovation is only one diner to a train, and none at all if the train leaves its terminal after 7 p.m. or

arrives before 8 a.m. To make a statistical showing that will pacify Washington, railroad passenger departments are preparing to revamp schedules of less important trains, pushing 6 p.m. and 6.30 p.m. departures over to 7 p.m. so that their cafe cars or diners can be cut out under this rule.

Privately, they consider most such moves silly, since there will be negligible savings of fuel and of rolling stock maintenance, and many passengers will be inconvenienced, including those making close connections from late afternoon arrivals.

• **Crack Trains Run Slower**—One concession to wartime necessity which railroaders heartily indorse, even though their pride suffers, has been lengthening schedules of many of the hot-shot through trains. For example, Western roads have increased running time of Chicago-to-Denver streamliners by one hour; of many of the faster Chicago-to-Pacific Coast trains by two. The Pennsylvania, Illinois Central, and Chicago and Eastern Illinois have lengthened Chicago-to-Miami schedules by 30 minutes.

Chief reason for slower schedules is to avoid having to sidetrack freights in order to keep passenger trains on time; the faster a train must be operated, the larger the number of other trains that must get out of its way.

The Line's Busy

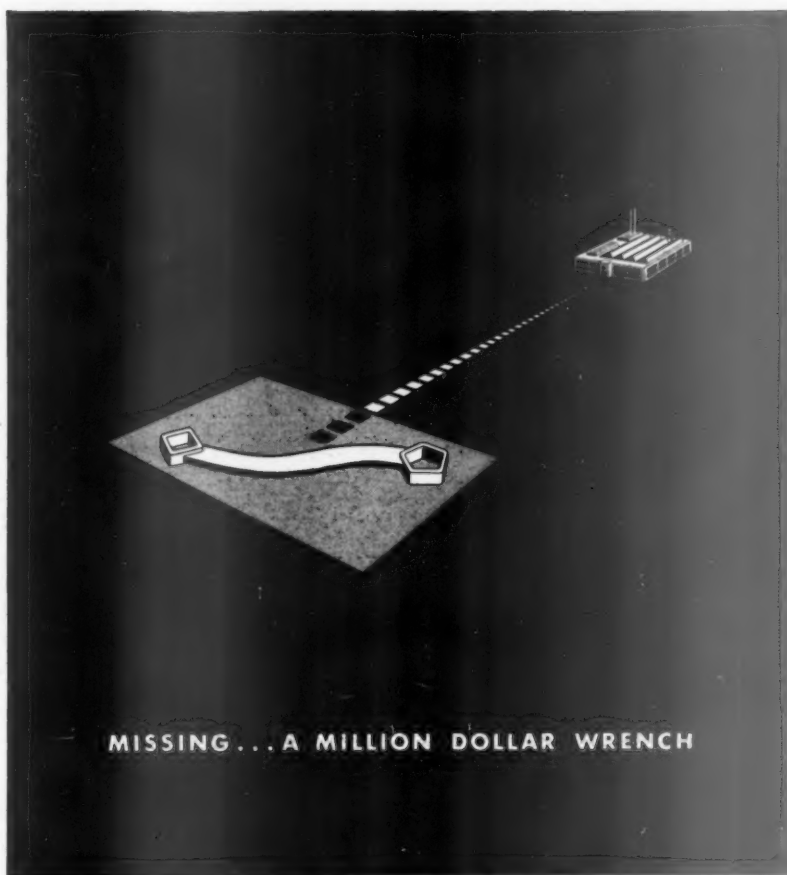
Telephone tieups aren't frequent, but customers feel WPB equipment freeze. Users told to make talks shorter.

When all the telephone companies began advertising a few days ago to urge on customers curtailed use of their phones, it highlighted growing restrictions on the nation's telephone system. Facilities and services are largely limited by WPB's Order L-50, to their present status.

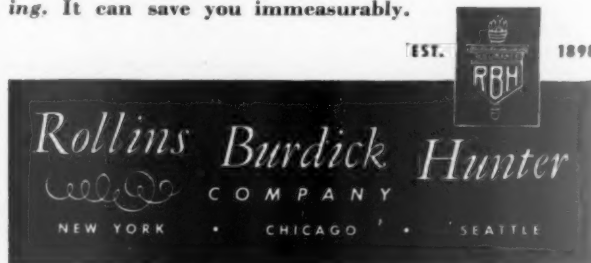
• **Curb Is on Expansion**—Home users, except in extreme cases, probably won't be deprived of their telephones; most businesses will be permitted their equipment or service. However, expansion is allowed, in general, only for the armed services, civilian defense, governmental agencies, war industries, and organization's serving "the health, safety, or welfare of the public."

Under the rules, a major problem arises when a company contemplates moving. It should check the new locality as to telephone facilities, because it probably won't be allowed to take what it has with it.

The WPB's ruling is that new or additional services may not be had unless previously constructed lines and



The fire hose was there. The fire hydrant was there. The water pressure was there. But there wasn't a wrench within a mile of the plant that would open the hydrant! A simple, routine discovery—yes—but typical of the many "tremendous trifles" which, if overlooked, cause tremendous losses. • In this war of production, every plant must be kept operating at top speed. Every breakdown of a vital machine, every man-hour lost through needless accident, every waste through preventable fire—increases the dangers of *too little and too late*. • We can help you maintain operating schedules by eliminating hidden hazards and reducing loss possibilities. This service costs you nothing. It can save you immeasurably.



NATION-WIDE SERVICE IN ALL LINES OF INSURANCE

WAR-TIME PROBLEMS Solved by Modern Research

- **Waterproof Cloth or Paper** in one operation. (133)*
- **Flameproofing Agent** cuts fire risks for textiles, paper, wood and composition board. (143)*
- **Cement, Concrete, Stucco** for defense buildings can be made waterproof. (138)*
- **Metal Castings**, smooth and non-brittle, are now produced by a new foundry core application. (115)*
- **Adhesive for "Cellophane"**, cellulose acetate and other synthetic materials. (118)*
- **Wood, Fibreboard** can now be flameproofed effectively. (176)*
- **Stop Wood Warpage** by using special wax which increases acid and alkali resistance and decreases time of impregnation. (146)*
- **Glycerin Substitutes** meeting specific requirements. (175)
- **Substitutes for Imported Waxes** such as Montan wax, Ozokerite, Japan wax, etc. (114)*
- **Non-Stick Wrapper** for packaging sticky candies and other products by new wax coating of white, odorless, synthetic wax in conjunction with paraffin wax. (156)*
- **Synthetic Rubber** can be made flexible by a new plasticizer. (184)*
- **Thermosetting Cements** for lamp and radio tube bases. (164)*
- **Temporary Clay Binder** for ceramic insulation prior to firing, enabling the clays to be molded without crumbling. (113)*

*JUST DO THIS:

See number in parenthesis after each subject. Jot down and mail to us any number that interests you. We will send you data sheets about the chemicals and their uses. Answers to many other problems in your industry are given in our 112-page manual "Chemicals by Glyco" — which is yours for the asking.

GLYCO PRODUCTS COMPANY, INC.
230 King St., Dept. B.W. 4, Brooklyn, N. Y.

switchboards can easily handle the added load.

• **Hard on New Applicants**—Even the company in one of the preferred lines is more or less restricted; use of facilities and services must be held to minimum requirements, and all fancy equipment will be installed only on proof of need. Of the 2,000,000 to 3,000,000 applicants (about 80% residential) who probably will ask for service within the next two or three years, most will be out of luck.

Yet the restrictions aren't too ominous. About 24,000,000 telephones now are in use—60% of the world's telephones—and the telephone system is currently handling conversations at the record rate of 110,000,000 a day. With an absolute minimum amount of copper and other critical materials, the telephone plant can be maintained so that it is unlikely the service will suffer appreciably from the wearing out of the present plant.

These are the specific present shortages of telephone service and facilities:

• **Long Distance**—In several congested centers of war activity, particularly in cities like Washington, Atlanta, New Orleans, Memphis, and to a lesser degree Norfolk, Va., the huge increase in traffic is causing piled-up circuits. The rest of the country is in fairly good shape, without much diminution of pre-war fast service. The congested areas may be cleared up by installing new cables which is now being considered by

WPB and the armed services. The telephone companies today are asking business and the public in general to use the telephone more sparingly. In regard to long distance the word is "don't make unnecessary calls, be brief, make all calls possible in the off-peak long distance periods of noon to 2 p.m., 5 to 7 p.m. and after 9 p.m. and don't call Washington unless urgent."

• **Teletypewriter Exchange (TWX)**—The telephone companies are having to supply a very large amount of TWX service to the armed services and other war agencies. There is an especially busy period from 3 to 5 p.m. daily when military messages are generally at a peak. New or additional installations of teletype printers may be difficult to obtain because of the demands of the armed services.

• **Local Telephone Service**—Businesses not doing war work cannot get new extension telephones, handsets for present instruments, longer cords or cables, louder ringing bells or any other changes in their telephone apparatus unless the equipment to be replaced is unserviceable. A manual PBX board cannot be replaced with a dial PBX unless the latter is more feasible in the locality concerned.

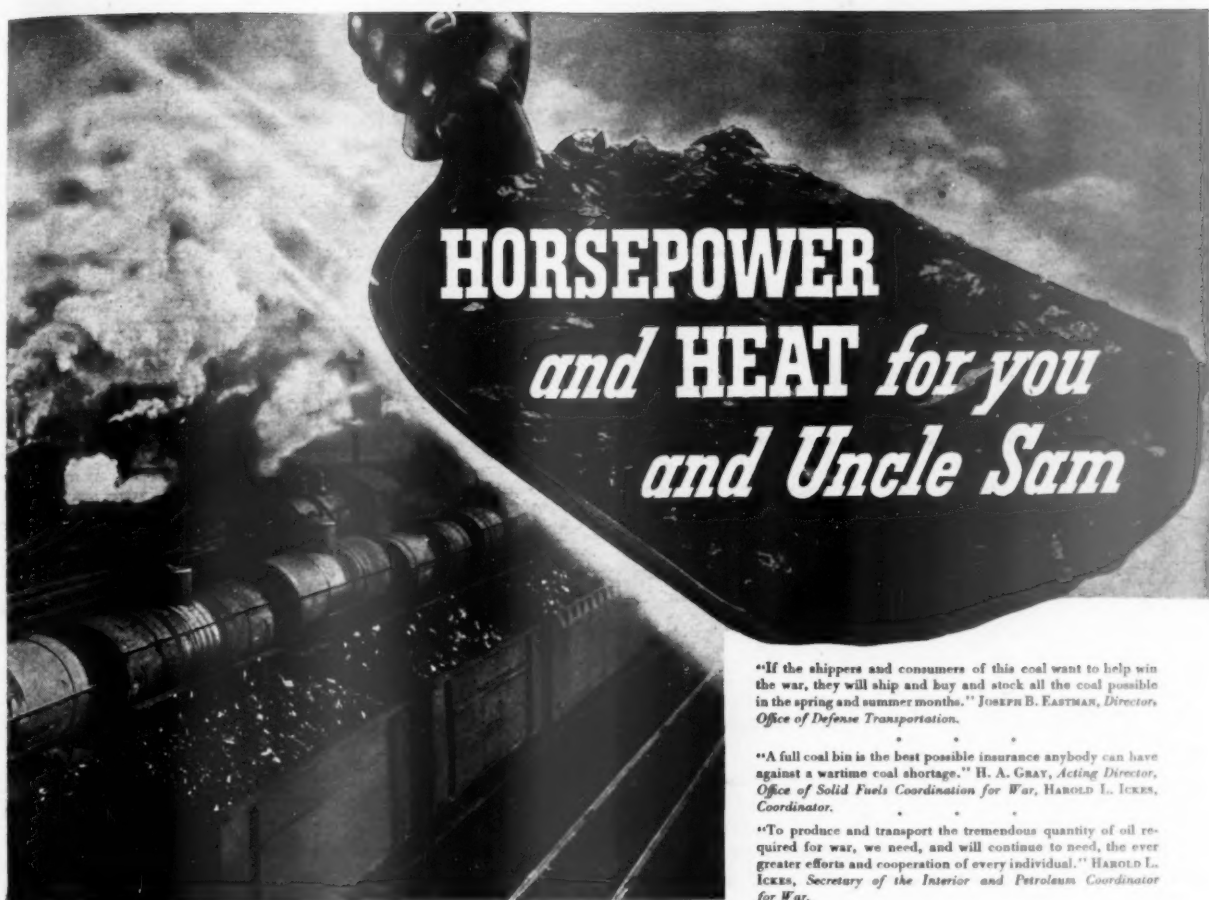
As to what would happen to the ordinary telephone user in an area threatened by invasion, Hawaii is a good "guinea pig." There has been little curtailment in local civilian telephone use by the Army authorities in the islands.



G.M.'S WAR WARES

Employees of the six divisions of General Motors in Dayton as well as other townspeople are currently attending a gigantic "Arms for Victory" tent show where they can see what other G.M. plants are making for war. The display, which is housed in a tent

built for the G.M. Parade of Progress which ended its six-year tour last December, consists of guns, plane and tank parts, engines and precision instruments. More than 180,000 persons have viewed the educational show which includes, in addition to the arms exhibit, a patriotic stage production with a cast of 178.



"If the shippers and consumers of this coal want to help win the war, they will ship and buy and stock all the coal possible in the spring and summer months." JOSEPH B. EASTMAN, *Director, Office of Defense Transportation.*

"A full coal bin is the best possible insurance anybody can have against a wartime coal shortage." H. A. GRAY, *Acting Director, Office of Solid Fuels Coordination for War, HAROLD L. ICKES, Coordinator.*

"To produce and transport the tremendous quantity of oil required for war, we need, and will continue to need, the ever greater efforts and cooperation of every individual." HAROLD L. ICKES, *Secretary of the Interior and Petroleum Coordinator for War.*

IT takes a lot of transportation to keep America's plants supplied with the ore, chemicals, and other necessities for the machines of war.

And there is still another urgent demand — **FUEL** — for power and heat.

So to the railroads' record volume of war-time freight is added the emergency carrying of coal and oil.

Today the railroads are hauling about 750,000 barrels of oil a day into the East—more than 50 times the amount they are usually called upon to carry.

Production of bituminous and anthracite coal, most of which moves by rail, has been stepped up to nearly 12½ million tons a week.

How these records have been made is a story of splendid cooperation. Shippers are loading cars fuller and faster, and releasing them quicker.

And they are cooperating, too, by anticipating their coal needs — another way to help keep the war program on the move — to help keep our homes warmer this winter.

ASSOCIATION OF
AMERICAN



RAILROADS

WASHINGTON, D. C.

HOLOPHANE *Planned* LIGHTING

Saves

- ★ CRITICAL MATERIALS
- ★ ELECTRIC CURRENT
- ★ MANPOWER

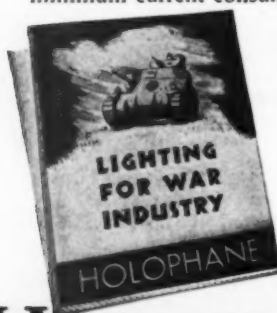
to Provide

- More GUNS
- More TANKS
- More PLANES

Holophane Planned Lighting achieves economy through control . . . Now with the national effort straining for conservation, the fundamental economies provided by Holophane equipment are more desirable than ever . . . Artificial lighting is part of the "intermediate" machinery that produces the "immediate" implements of war. The more saved on this "intermediate" equipment the more available for the armament itself.

HOLOPHANE LIGHTING *Converts WASTE into WEAPONS*

- ★ **CONSERVES MATERIALS:** Holophane Lighting units use a minimum of critical materials in their construction.
- ★ **CONSERVES MAN HOURS:** Holophane Lighting, planned for a specific production situation, creates seeing conditions that mean less man hours per given task, less accidents, less errors and less nerve strain. It also affords economies in maintenance time and expense.
- ★ **CONSERVES ELECTRIC POWER:** Holophane controlled illumination assures effective light for essential working areas with minimum current consumption.



← SEND FOR THIS BOOK

—produced for war industry executives— which will show you how to plan the most efficient lighting, how to get the full results of your planning, how to figure cost, maintenance and installation. Sent without charge.

CONSULT HOLOPHANE ENGINEERS . . . They stand ready to serve you with expert counsel on your individual lighting requirements. Call on them without obligation.



Holophane

COMPANY, INC.

Lighting Authorities Since 1898

342 MADISON AVE., NEW YORK

HOLOPHANE CO. LTD., 385 YONGE ST., TORONTO, CAN.

Saccharin Spurt?

Possibilities as supplement to rationed sugar are limited by FDA attitude and by fact that one ingredient is strategic.

A German student named Fahlberg, going home to supper one night in 1879 after a day in the laboratory of Johns Hopkins University, noticed that his bread, meat, and potatoes tasted peculiarly sweet. The sweetness came from his own hands—not from a culinary slip up. Next day, Fahlberg sniffed and tasted among his beakers until he found the one which had spoiled his supper.

● **Changed Emphasis**—Fahlberg's discovery was saccharin. Ordinarily, consumer demand for saccharin is limited to the diabetic and the unhappily obese. Now, however, it is being eyed by the slim and healthy as a possible supplement to their half-pound-per-week sugar ration. E. R. Squibb & Sons, which (like most pharmaceutical manufacturers) keeps saccharin in its line as a non-promotional item, now is giving it a push with display pieces which suggest its use by the unafflicted. Squibb's saccharin tablets have been treated to effervesce, dissolve quickly even in iced tea.

Bottlers of soft drinks have been agitating for permission to augment their reduced sugar supply with saccharin. Thus far, they have received a cold shoulder from the Food & Drug Administration. FDA's attitude is that saccharin—compounded from coal (toluene), salt, sulphur, water, and air—has no nutritive value, hence that its substitution for sugar in food products—other than those sold for diabetics—constitutes adulteration.

● **Not Harmful, But**—There's no law, of course, to prevent the public from picking up a few saccharin tablets at the corner drug store and using them to hep up the sweetness of home-concocted brews. In quantities which human taste-buds can stand, saccharin is not harmful; FDA's objections hinge solely on the fact that its substitution for sugar in foods robs consumers of a little extra nourishment.

FDA is not the only bar to wider use of saccharin. Monsanto Chemical Co., only big U.S. producer, reports that output is now lagging behind demand, which has stepped up staggeringly since the sugar pinch began to hurt. Parke, Davis & Co., Chicago, reports a 30-fold increase in demand and figures quoted by other pharmaceutical houses are in line with this.

Stumbling-block is the drastic shortage of toluene, one of saccharin's five basic raw materials but also the basic raw material for explosives.

● **High-Powered**—Pure saccharin is ap-



Frank L. McGuire

PORTLAND REAL ESTATE BROKER ESTABLISHES NATIONAL RECORD

*...with the help of
Oregonian Advertising!*

*Typical Portland
home offered by
McGuire. And a
typical value
at \$5250.*



● Portland's Frank L. McGuire organization, which specializes in home selling, has just completed the most successful campaign in its 33-year history by selling more than 1,000 homes in the first six months of this year. This, we are informed, is a national sales record.

This remarkable record proves, first of all, that business is exceptionally good in this market. And no wonder—with lumber mills, aluminum plants, pulp and paper mills and other basic industries working night and day. Biggest industrial news of all, is that 150,000 men are to be employed in shipyards in this area by the end of this year.

The McGuire record also proves that The Oregonian, with its area-wide coverage, reaches and influences the buying element in our population.



Scene in the busy McGuire salesroom.

McGuire has always been *predominantly* an Oregonian advertiser.

When advertising in Portland, do as successful advertisers do—use The Oregonian.

THE GREAT NEWSPAPER OF THE WEST

THE OREGONIAN

"More than a city newspaper—a tradition in the Northwest and a part of the life of the region."

REPRESENTED NATIONALLY BY PAUL BLOCK & ASSOCIATES



HE WHO *"steps up"*
ALSO SERVES

UNION PACIFIC is doing its share to meet the nation's vital need for dependable transportation. It's a job we're proud to do. Over "the strategic middle route" connecting East with West, our gigantic locomotives are hauling not only war materials but also thousands of Uncle Sam's men in uniform.

Thus, it is apparent that travelers may not always find it possible to obtain their preferred accommodations. Perhaps only coach seats or upper berths will be available. To Union Pacific patrons, whom we have had the pleasure of serving and will continue to serve to the best of our ability, we would like to say "he who steps up also serves" and express our thanks for their cooperation.



The Progressive
UNION PACIFIC RAILROAD
The Strategic Middle Route

proximately 450 times as sweet as sugar. A single grain will burn the tongue, leaving a sickening taste for several hours. Commercial saccharin is adulterated to tone down its sweetness, usually to the point where a small tablet is the equivalent of a teaspoon of sugar.

Though most people think of saccharin primarily as a means of satisfying the diabetic's sweet tooth (the Metropolitan Life Insurance Co. estimates that 650,000 diabetics in this country are steady saccharin customers), it has long had other uses—for instance in home canning of pickles. There are many big commercial users outside the food field, notably makers of mouth washes, tooth pastes and powders, and tobacco companies. One pound of saccharin, costing \$2 will do the work of \$22.50 worth of sugar—450 lb. at 5¢ a pound. Cost is not saccharin's only advantage. It is used as a sweetener in tobacco flavors because sugar would furnish food for mold growth.

The U. S. imported all its saccharin from Germany until 1901, when Monsanto was founded and became the first American manufacturer. In recent years, Monsanto has competed with Germany in export markets, mostly the Far East, where the long arm of FDA does not reach and saccharin is widely used as a food sweetener.

Oil Map Redrawn

Realignment of markets is envisaged as federal authorities seek ways of cutting down the need for transportation.

Reshuffling of petroleum markets appears in prospect for the various producers. The objective of federal regulatory authorities is to eliminate as much transportation as possible, without regard to present specific arrangements between producer and seller companies.

• **A Case in Point**—Indicative of the way the program is being made effective is the fact that Michigan recently benefited by transfer of an order for 10,000 bbl. of crude from Mississippi, originally destined for Massachusetts.

After a meeting of oil officials in Washington last week, P. J. Hoffmaster, Michigan well supervisor, dwelt on the desirability of expanding the output of Michigan fields. He said the government wants increased production from fields close to the eastern seaboard, if it can be established that the increases will not seriously deplete oil reserves.

• **Michigan Estimate**—Hoffmaster estimated that Michigan's output could be increased to 100,000 bbl. a day if new fields were developed and waste eliminated. At present the state's daily quota is 64,300 bbl.

Air Taxi Service

Civil Patrol arranges to carry passengers and freight for war plants and the armed services. Paid on cost-plus.

The Office of Civilian Defense's Civil Air Patrol is organizing its privately-owned planes for transportation service to war plants and the armed forces.

• **Job for Puddlejumpers**—CAP figures that thousands of available planes, mostly puddlejumpers with a speed of about 100 m.p.h., a range of 200–400 miles, and capacity of 200 lb. to 400 lb. payload, can do valuable courier work.

Guide to the ambitious plan is an initial courier service already operating out of a point on Long Island flying parts, drawings, and persons between centers where 90 m.p.h. is speedy compared with surface traffic. An experimental operation out of the Middletown (Pa.) Supply Depot, to points all along the Atlantic, gave good results, its main handicap being one-way loads, whereas all trips should be loaded both ways to pay off.

• **Relays for Long Trips**—CAP is instructing its unit commanders throughout the country to organize for special or nonrecurrent trips; regular short runs, possibly on schedule; feeder services to stops on regular military and commercial routes; services out of fixed bases such as large aircraft and other war plants. The bulk of CAP traffic would be local because of short range, but relays would be handled in the industrial regions.

The New York Wing of CAP studied one war plant which last April made 286 highway trips rolling 14,780 miles which would have straightened out to 11,040 by air. Roadtime was 422 hours against 110 calculated by air. Road cost was estimated at \$1,700 and air cost at less than one-third that. But time, on items CAP would carry, is far more important than any comparative cost considerations.

• **How Pay Is Arranged**—All services by CAP members or groups will be under general orders from ODT headquarters in Washington. Competition with existing air transport will be strictly avoided. Plane owners are paid on a cost-plus-wage basis for all missions for federal agencies. Private concerns arrange the rate of payment with local CAP units.

Higher-powered CAP planes are on antisubmarine patrol, getting plenty of thrills and giving valuable help to military forces. The organization has many types of jobs on its schedule, like patrolling power and pipe lines, towing targets for the air arms, night flying for searchlight practice, forest fire patrol.

They shoot their fires with Gas Pistols

...and kill as many as four a day!



ELECTRIC MOTORS



SHREDDED RUBBER



FLAMMABLE LIQUIDS

2 SLAPPING DOWN THESE FIRES

which appear in numerous, widely-separated spots, requires extinguishers that are portable . . . handy . . . deadly in their fire-killing power. Therefore, Kidde Pistol-Type Model 2 hand extinguishers are placed within easy reach throughout Company "L's" plant.



3 WHEN A FIRE BLAZES UP, an employee grabs an extinguisher, aims at the fire, pulls the trigger. Instantly a blast of Kidde carbon dioxide snow-and-gas smothers the fire in a matter of seconds. Because it's clean, dry and harmless to anything but fire, Kidde gas does not injure chemicals or equipment. It vanishes completely . . . makes no mess, leaves no residue. A non-conductor, it's safe for electrical fires.

HAVE you electrical equipment or flammable liquids in your plant? Guard these fire hazards with the speedy, flame-killing power of Kidde carbon dioxide—the gas that harms nothing but fire!

Kidde portable extinguishers

Kidde 

range from a two-pound, pistol-type unit to wheeled types containing 100 pounds of carbon dioxide. Built-in types may be manually or automatically operated; may protect a single spot or an entire process room. Write us for complete details.

Walter Kidde & Company
Incorporated
724 West St., Bloomfield, N. J.

Can we help
you, too . . .



to speed output, conserve fuel,
make the most of present

GAS equipment?

The Gas engineer today has a pivotal role in helping industry to produce guns, tanks, planes cheaper and faster.

In thousands of plants producing war materials, Gas engineers are checking with management and workers on ways to speed output with present equipment through adjustment of Gas burners, minor changes in equipment, new methods of using existing furnaces . . . often without new equipment.

Gas research, engineering and experience have forged ahead amazingly in the last few years. If your plant hasn't taken advantage of this new knowledge, maybe it should. The whole Gas industry is bent on helping

American industry to win this war . . . and all its experience and knowledge are being poured into industrial war plants to bring victory at the earliest possible hour.

Industrial Gas is a vital war material—use it wisely!

Is your plant getting the best possible production results from the Gas equipment you have? If not, ask your Gas company to send in a technically skilled engineer to take a look and see what could be done. You're welcome to his services.

AMERICAN GAS ASSOCIATION
INDUSTRIAL and COMMERCIAL
GAS SECTION
420 LEXINGTON AVENUE, NEW YORK

THE TREND IS TO GAS

FOR ALL
INDUSTRIAL HEATING



HORSE LAUGH

Business under rubber and gas rationing brings old dobbie back into the picture at Long Beach, Calif., and parking meters serve as hitching posts.

The Auto Story

Registrations in Michigan drop 5.9% in first half of 1941; experts feel decline for nation may have been as high as 10%.

Proof that automobile registrations are beginning to dwindle comes to light simultaneously with publication of figures showing that 1941 ownership of cars and trucks was the largest in the nation's history.

• **Gain 7.12% in 1941**—A report of the Federal Works Agency of the Public Roads Administration showed 1941 registrations of 34,383,167 privately-owned and 389,829 publicly-owned vehicles. The aggregate of 34,764,996 was up 7.12% from the 32,452,861 of 1940.

But the fact that registrations have already begun to decline, due to minimized new car replacements and gasoline and tire rationing, was vividly demonstrated in Michigan. Registration figures for the first six months of this year, released by the Department of State, showed a total of 1,446,863, off 5.9% from the 1,559,096 listings in the same 1940 period.

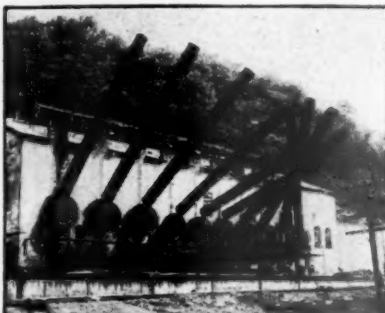
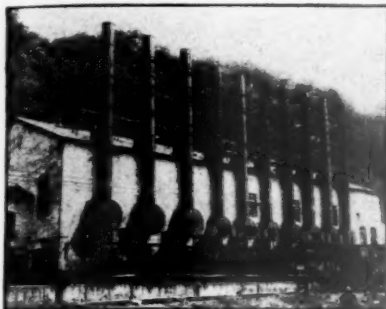
• **National Drop Perhaps 10%**—Michigan, it was pointed out, would be likely to have a smaller proportion of loss in registrations than the nationwide average, due to cleanup of new car ration quotas each month, and to the fact that the heavy war work schedules in Michigan plants require high utilization of cars. One trade source in Detroit estimates the national average may have fallen as much as 10% in the half year.

PRODUCTION

New Scrap Drives

Vertically organized for key industries, these campaigns will supplement salvage work of WPB section's regional offices.

Five regional conferences in five widely separated cities (New York City, July 7; Atlanta, July 8; Chicago, July 10; San Francisco, July 13; Dallas, July 16) brought together the chief engineers of maintenance, the emergency salvage directors, and many other executives of



Some of the 100,000 tons of scrap collected by the coal mining industry came from an old boiler plant belonging to the Glen Alden Coal Co. Tied together by cables, all ten stacks fell at once, and into the hands of Louis Cohen & Sons, dismantling contractors.

Business Week • July 25, 1942



**POWER
THAT FIGHTS**

Friction
WILL NEVER FIGHT BATTLES

POWER devoured by friction can be measured only in planes, tanks, guns and ships never built . . . in prolonged war . . . in needless sacrifice . . . in "too little — too late."

Station Dodge Bearings at all vulnerable points along Victory's power highways — they liquidate friction . . . remove its fatal drag — so that all-out power gets through to the fight on Victory production lines. Power doesn't leave its punch on the way when Dodge Bearings stand guard.

The infiltrations of destructive dirt, dust and grime — breeders of friction, wear and waste — are defeated by Dodge indestructible steel seals that close the bearing tight to foreign substances but leave it wide open for power. Leakage

of lubricant is likewise blocked . . . protecting the bearing against neglect. The ruggedness of Dodge Bearings, from inner sleeve through to outer housing, is being demonstrated daily on millions of shafts turning for Victory.

Dodge has dedicated 61 years of experience to defeating friction—developing a complete line of power transmission equipment that combines ruggedness with a free ride for power. Proved when the penalty for power lost to friction was paid merely in money . . . Dodge power transmission equipment is more vital than ever today when the stake is the lives and freedom of millions of people.

DODGE MANUFACTURING CORPORATION
Mishawaka, Indiana, U. S. A.



THE RIGHT DRIVE FOR EVERY JOB

WHO NEEDS PAPER GADGETS for his WAR CONTRACTS

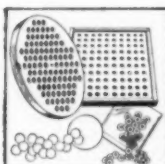
War contracts bring involved sets of specifications. Maybe you have never had to consider a paper component in your peacetime product. But maybe today it's a different story. If so, turn for help to Dennison. For in addition to making its familiar tags and labels, Dennison has facilities for working paper into an infinite variety of articles. Here are examples:



FLARE PARACHUTE PARTS. Parachutes for flare shells are machine sewn from special para-flare tissue paper. Spacer and pilot discs keep cords of another type of parachute from tangling. These are of heavy binders board, punched, and in the case of the larger disc, are brass eyeletted and then paraffined.

BOMB & MINE TAGS.

The round instruction tags for bombs and mines are metal rimmed for extra strength. One has a metal ring fastening device. Oblong tag carries cotter pin strung through a reinforcing metal eyelet. These are modifications of Dennison stock tags.



SHELL ASSEMBLY PARTS. Round detonator tray is constructed of cardboard discs, square one is varnished wood. Fuze parts, primer discs, washers and powder separators

are made from such stocks as felt, onion-skin, foil, newsboard, cork. Processes include laminating, perforating and diecutting.

SET-UP BOXES. Dennison set-up boxes package many a high priority item. Sketched is one with a patented hinge to hold steel taps, one with a slotted platform to hold a surgeon's knife, and one with dividers to cushion and protect fragile glass drug ampoules.



If you have a paper-converting problem write Dennison today. Offices in all principal cities.



Directing the scrap campaign of the American Industrial Salvage Committee, which bloomed this week in magazines and newspapers all over the country, is its administration committee: (left to right) Oliver E. Mount, representing Steel Founders Society of

America; R. S. Wilson, representing Rubber Manufacturers Assn.; Robert W. Wolcott (president of Lukens Steel) chairman, representing American Iron and Steel Institute; Charles R. Hook (president of American Rolling Mill), committee vice-chairman.

the country's 900 railroads to hear and discuss their part in the nationwide drive for scrap metals and materials. Similar meetings had previously been held with both the coal mining and the petroleum industries. Future meetings will soon be announced for the public utilities, the textile industry, the chemical industry, the shipbuilding industry, the bus industry, and the trucking industry.

Under a new setup of the Industrial Salvage Section of WPB's Conservation Section (formerly Bureau of Industrial Conservation) the work of "getting in the scrap," done by 13 regional offices in as many major cities and 406 "industrial centers," will be supplemented by intensive vertical campaigns in specific industries, each headed by a national salvage director experienced in the industry's ways.

• **Already at the Helm**—Salvage director for the railroads is Bert C. Bertram, veteran of 30 years of railroading, on leave from the Lehigh Valley, who addressed each one of the five railroad regional meetings. Salvage director of coal mining is H. H. Eggleston, recently of the Deep Vein Coal Co. Petroleum salvage director is M. R. Singleton, vice-president of Valvoline Oil. S. D. Perlman, consulting chemical engineer with a du Pont background is salvage director for both textiles and chemicals.

Public utilities salvage is directed by H. M. MacDougal, borrowed from the executive staff of the Copper Wire Engineering Association. L. J. Cambron, an executive of the Emergency Fleet Corp. during the last war and more recently president of Varipplan Sales Corp., heads up shipbuilding salvage. L. C. Grenebaum, salvage director for both bus and

truck, is president of Metropolitan Distributors, big trucking concern.

• **Advisory Board**—All seven directors work in close cooperation with a five-man technical advisory board (John O. Emerson, chairman, formerly of Forbes Magazine and the Elliott Service Co., Edward Herbert of the Bell Telephone System, D. W. Gee of Western Electric, R. A. Wheeler of International Nickel, R. D. Bullard of Bullard Co.) and with them report directly to Hamilton W. Wright, chief of the Industrial Salvage Section and former executive of Carborundum Corp. Mr. Wright reports to Lessing J. Rosenwald, chief of the whole Conservation Division. Offices are in the Railroad Retirement Building, Washington.

Activities of the coal mining industry's director are credited with bringing in 100,000 tons and more of scrap. The petroleum industry's director is credited with 400,000 tons, mostly from useless oil derricks in the Southwest which have been largely superseded by portable models (BW—Oct. 4 '41, p. 46).

• **90% Iron and Steel**—Strange as it may seem, the characteristics of scrap from the various vertical industry operations vary but little—about 90% being iron and steel, 6% nonferrous metals, 4% "all other," including rubber, burlap, solvents, plastics, etc.

The largest all-over return is expected to come from the railroads as the result of the five regional conferences. No official bogies have been set for the various industries, but an experienced salvage man in close touch with the thinking of the Salvage Section estimates the following "expectations" for the balance of 1942: railroads, 1½ to 2½ million tons; coal mining, petroleum, public utilities,

process industries (not including coal and oil), shipbuilding, bus and truck (as a unit), 200,000 to 300,000 tons each.

• **In Addition, Used Rails**—In addition to the scrap program, the railroads are not only charged with the job of delivering the material to the mills and smelters, but with the furnishing of 40,000,000 ft. of used steel rails to the Army, Navy, Maritime Commission, and various war plants for their railroad and yard operations. They have already delivered 50,000,000 ft., or about 5,000 track miles, but have promised to rip up 4,000 additional miles of old track.

According to the directing heads of the big \$2,000,000 scrap campaign of American Industrial Salvage Committee (BW—Jun.27'42,p20), which gets under way this week, "6,000,000 additional tons of iron and steel alone . . . are urgently required to bring our war program to full strength." That the mills will get their requirement is almost a foregone conclusion.

Take 1,500,000 tons from the railroads plus 200,000 each from six other industries (or 1,200,000 tons). That gives you 2,700,000 tons. Add to that figure 2,500,000 tons that should come during the rest of 1942 from "prompt industrial scrap" (which comes through regular scrap trade channels from regular manufacturing operations without benefit of special campaigns). 750,000 from auto graveyards, 500,000 from farms, 500,000 from households, and you have 6,950,000 tons. Of that, 90% or 6,255,000 tons will be iron and steel.

• **Dormant Scrap**—Still more is to be found in "dormant industrial scrap"—old machines, dies, discarded models, slag piles, sludges, and residues. There might even be 100,000 tons of steel or more in the tin cans now being reclaimed, and not included under the head of household scrap.

An unprecedented spring house-cleaning came late in the season to the automobile industry (which does not have a special industry salvage director, but operates directly under Brewster Loud, chairman of the Detroit regional office), this year, but it came with a vengeance. Spurred by the fear that nothing less than a superlative showing in scrap-collecting would stave off orders for complete junking of civilian-goods tools and dies (BW—Jun.20'42,p48), maintenance men of the auto plants have been cleaning out shops with determination.

Reports filtering in to the Automotive Council for War Production, sponsor of the voluntary program for scrapping of old-model equipment, point to the gathering of 97,500 tons of iron and steel and 4,400 tons of non-ferrous metal since the industry drive began on June 15. Of these amounts junked, obsolete tools, dies and the like accounted for about 10%.



Machining an Anker-Holth chuck body.

IMMEDIATE DELIVERY!



Anker-Holth highspeed revolving air cylinder.



Anker-Holth air chuck for machining large thin wall flasks.

Anker-Holth "Airgrip" Highspeed Revolving Air Cylinders ordered today will be shipped immediately. Our manufacturing facilities have been greatly expanded to meet demand for "all-out" war production.

"Airgrip" Shell Holding Equipment

Anker-Holth makes a complete line of expanding arbors and collet chucks for 20 mm. to and including 155 mm. projectiles. At left—large Anker-Holth Air Chuck used for machining 21" flasks with 3/8" wall.

Other Anker-Holth products: Revolving cylinders for feeding bar stock through spindle; parallel grip collet chucks; operating valves; and, air filters, automatic lubricators and regulating valves. Also, hydraulic cylinders.

Write for bulletin on "Airgrip" Air Operated Chucking Devices!

Anker-Holth Mfg. Co.

"AIRGRIP" CHUCK DIVISION

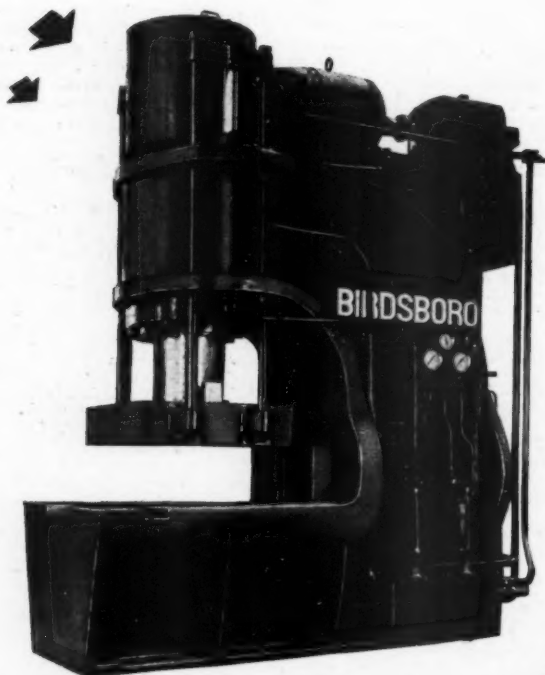
332 S. MICHIGAN AVE · CHICAGO, ILL.

faster!
builds bigger ships



This 350-ton Birdsboro Jogging Press is "in the Navy now," producing ships that keep our overseas fighting men well supplied. This completely self-contained unit is typical of many Birdsboro Hydraulic Presses that are helping to provide the United Nations with more ships, more tanks and more planes.

- Birdsboro's Hydraulic Engineers will be glad to work with you, to provide the press to meet your specific requirements.



BIRDSBORO STEEL FOUNDRY & MACHINE CO.
Birdsboro, Pennsylvania

BIRDSBORO
Hydraulic Presses

Shortages Hurt

Many war plants forced to curtail operations because of insufficient supplies of alloy steel, aluminum, or copper.

Materials shortages are pushing industry, war plants included, onto the ropes. Stoppages due to supply problems are cropping out all over the country, and they give evidence of continuing.

Many company officials insist, in fact, that material shortages are so serious that they are delaying the day of the anticipated manpower crisis in "tight" areas.

• **Metals the Bottleneck**—A canvass by the War Production Board in mid-July disclosed that no fewer than 19 major armament suppliers—and "major" was no idle designation—experienced tieups of a week or more. Nearly all of the shortages involved alloy steel, aluminum, or copper, or a combination of these metals.

On the heels of this checkup came the announcement from Yellow Truck & Coach Manufacturing Co., largest military vehicle supplier, that it was forced to reduce operations very materially due to inability to obtain axles from Chevrolet Gear and Axle Co., which in turn was embarrassed by shortages of gear stock.

• **Number of Shifts Cut**—All other truck companies appeared to be in more or less the same boat as Yellow. Trade sources reported that July schedules were generally lower than in June. One company was said to be working on a one-shift, five-day basis on its final assembly line, although orders on hand called for a six-day, two-shift schedule.

In addition to gear stock and alloy steels, company sources said that engines were coming in slower than ordered.

• **Action at the Mills**—The situation on alloy steel was deemed so serious by WPB that immediate changeovers of operations were said by trade sources to have been ordered at several mills. These plants were told to curtail carbon steel as much as possible, and turn first attention to alloy output.

Aircraft production was still laboring under the handicap of insufficient aluminum supply. Manufacturers of electrical goods reported extreme difficulty in obtaining wiring, ignition harnesses, generators, starting equipment and commutator bars. Producers of engine radiators were severely bothered.

• **Suppliers Can't Keep Up**—An analyst of WPB, gloomily surveying the picture, said the entire situation stemmed from the fact that industrial conversion to war output has gone so far that mate-

rials suppliers simply cannot keep up with the enlarged demand. He expressed the belief that one practical means of meeting the situation was to exercise strict control over production with a view to reducing waste.

In Detroit earlier this month, WPB Planner Robert Nathan said it was entirely possible that, in view of forthcoming materials problems, three-shift operations in many plants might have to be trimmed to two, and two to one. Nathan took a look at a brass chandelier in the hotel room where he was talking, and remarked that it might even be necessary to bring such items into the national materials pool to feed the insatiable war machine.

Mine Air Treated

Problem of roof falls is attacked through installation of a conditioning plant to control temperature and humidity.

Roof falls constitute one of the most vexing production problems in coal mining. Not only do they halt operations until the debris has been cleaned



ERROR PAYS

Max Kholas, a Westinghouse employee, miscalculated the size on an order for a new endless cotton belt for a high speed grinding machine—ordering the new belt six inches too long. In attempting to rectify his mistake, he devised a method of so cutting and gluing cotton-web belting that it can replace more expensive machine belts, thus saving time and materials. Westinghouse awarded him a \$1,200 bonus for his mistake.

Business Week • July 25, 1942



Subcontractors build 85 per cent of the wooden parts for the Beech Aircraft Corporation's "all wood" Advance Trainer, AT-10. Strong, light, boil-proof TEGO-bonded plywood sections are widely used in this plane's construction. (Right) Typical plywood construction showing Tego Resin Film interleaved between the veneer layers before hot pressing.

TEGO-BONDED plywood is showing many firms the way



USING TEGO-BONDED plywood, firms which until recently were engaged in industries far removed from the aircraft field are now making airplane and glider sub-assemblies. Tego-bonded plywood is the accepted standard for aeronautical plywood which must comply with the rigid requirement of U.S. Army and Navy specifications. Introduced in 1935, Tego synthetic resin film revolutionized the production and use of plywood.

In the assembly of many essential plywood war products, Uformite CB-

550 combines the ease of handling of older type glues with the superior waterproofness of synthetic resin.

If you are planning to play a part in the production of plywood sub-assemblies for military products, write us today. As introducers of the resin adhesives which made possible the development and rapid production of plywood, The Resinous Products & Chemical Company is equipped to provide executives with vitally needed technical data.

Other Synthetic Resin Applications Developed By The Resinous Products & Chemical Company

The development of synthetic resin adhesives for plywood is only one of many fields in which the Resinous Products & Chemical Company have pioneered and specialized.

RESINS IN PAINTS—Over fifteen years ago, AMBEROL synthetic resins made possible the development of fast drying enamels. Today, AQUAPLEX resin emulsion has made possible a new type of coating widely used in camouflage work.

RESINS THAT PURIFY WATER—AMBERLITE Ion Exchange resins produce salt-free water, purify chemicals, recover metals from solutions, and today, their

unique properties are helping increase the production of synthetic rubber.

MANY SPECIALIZED RESINS—Water resistant cardboard for military packaging, mustard gas resistant finishes, modifiers for natural and synthetic rubber, weather-proofing of Army tent cloth—these are but a few of the many other applications where our synthetic resins are playing an important role.

BRING YOUR PROBLEMS TO US—Your wartime material or production problem may find an answer through our specialized knowledge of synthetic resin applications. Let us know your needs.

THE RESINOUS PRODUCTS
& CHEMICAL COMPANY

WASHINGTON SQUARE, PHILADELPHIA, PA.

9/9
88

★ *E* ★ WARTIME BOON *to business*



Elliott ALL-FIBRE Typewriteable ADDRESS CARDS ELIMINATE METAL

FOR PEACE-TIME SAVING TOO

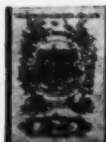
Elliott All-Fibre Typewriteable Address Cards are not a substitute, but an improvement. And there is a plentiful supply available. Many of America's leading corporations have been using them for years because, among other things

1. They are easily stenciled in an ordinary typewriter.
2. They are very durable—flex without bending, so will not jam.
3. They are lighter, cleaner, less bulky—and practically noiseless.

THE ELLIOTT ADDRESSING MACHINE CO.
151 Albany Street, Cambridge, Mass.

Elliott ADDRESSING MACHINES

Write for a copy of the widely discussed booklet "Unscrewing the Inscrutable." You'll read it from cover to cover, and keep it! Use business letterhead.



up and the roof retimbered; they frequently cause grave injury to miners and impair productive efficiency by keeping the miners in constant fear.

• **Control Measure**—To attack this problem, the Windsor Power House Coal Co. has installed a novel air-conditioning plant to control the temperature and humidity of the air in its Beech Bottom mine near Wheeling, W. Va. Put into service June 4, the system already has produced tangible results, although Windsor engineers are loath to make any claims for it until it has survived the test of year-around operation.

At the root of the problem is the condensed moisture on mine roofs caused by the introduction of warm air of high humidity into the deep passages where temperatures average from 55 to 60 degrees. As the temperature and humidity of the outside air fluctuate, "perspiration" on the mine roof increases or diminishes, creating a corresponding expansion and contraction in the roof structure.

• **Proof of Utility**—That the \$25,000 air-conditioning plant in the Beech Bottom mine can alleviate this condition became evident a few days after the system went into operation. A mechanical breakdown threw one unit of the plant out of service for 12 hours. Beads of "sweat" gathered on the roof of the 1000-foot section served by that unit and rock and earth falls were noted. When the breakdown was repaired, the sweating and roof-disintegration ceased.

Air-washing processes have been tried in several Indiana and Illinois mines, the U. S. Bureau of Mines reports, with encouraging results. But the Beech Bottom plant, designed to operate with a limited supply of water, is the first which uses water to chill and humidify the intake air, then employs the cold exhaust air from the mine to cool the water for its next passage through the system.

• **Other Advantages**—Although the primary purpose of the air-conditioning plant is the control of roof falls, J. M. Connor, general superintendent, and D. F. Welch, the Windsor engineer who conceived it, foresee other possible advantages. Any reduction in roof falls is likely to be reflected in cheaper workmen's compensation insurance premiums, which are based on an experience rate and now account for between 3¢ and 4¢ a ton on the production cost sheet.

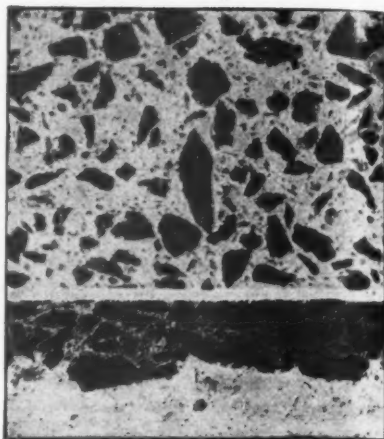
The assurance that a miner won't be struck by a rock weighing anywhere from a pound to a ton has an incalculable effect on his productive efficiency. And the designers are keeping an eye cocked on the influence of clean air on an occupational class which has waged an uphill battle against the dust particles and gases which fill a coal mine.

NEW PRODUCTS

Nonskid Flooring

Cortland Emery Aggregate is a new mixture of large and small particles of hard mineral emery, graded and put together by Walter Maguire Co., Inc., 330 W. 42 St., New York, for the production of nonskid, wear-resistant concrete floors. The aggregate is simply mixed with Portland cement and water, and applied as a floor topping.

Full-size surface and cross-section views reveal a floor which is nonslippery wet or dry, offering superior traction to



industrial trucks and human feet, preventing wear and tear on the concrete itself.

As hard service exposes and roughens the emery particles, their nonskid properties improve rather than deteriorate.

Seybolite

Unusual physical characteristics are offered by a group of new molded products and panels now being developed by Westport Products Co., Inc., Westport, Conn., under the generic name Seybolite:

(1) A fibre-graphite material which is hard and dense, about half the weight of aluminum, with tensile strengths up to 17,000 lb. per sq. in., compression resistances up to 90,000 lb. per sq. in., high resistance to moisture, acids, alkalis, and fire. It is readily workable with hand and machine tools, and so conductive to electricity that it can be electroplated.

(2) A hard, nonconductive fibre-astbestos material, mainly produced in thin panel form for laminating to the surfaces of fibre-graphite panels and changing their electrical characteristics.

(3) A moldable, fireproof fibre-mineral material with powdered marble or other natural rock included in its composition. It is heavier than the fibre-graphite, but like it can be machined.

Electric Furnace

Cooley Electric Mfg. Co., Indianapolis, is building the new Cooley Electric Heat Treating Furnace along the lines of its laboratory muffle furnace, which is standard apparatus in many laboratories. Built in two heating chamber capacities (8x6x14 and 10x6x18 in.) for operation at temperatures up to



1,850 F., it is intended to supplement larger furnaces in the economical and fast heat treating of small parts, drawing or tempering, normalizing or annealing, preheating for subsequent higher-temperature hardening, or for handling emergency repair orders.

Bomb Pump

It is considerably easier on the back to swing the lever of the Zadig Patent Pump for extinguishing incendiary bombs (or spraying insecticides) than to push down and pull up on the piston



of an orthodox stirrup pump. The new device has no strategic materials in its construction, is manufactured out of wood and fabric by The Zadig Patents, 1 Bouton St., South Norwalk, Conn. It folds flat when not in use. Even its two lengths of hose are fabric.

Business Week • July 25, 1942

WE'VE BEEN WORKING ON THE RAILROAD ...FOR FIFTY YEARS!

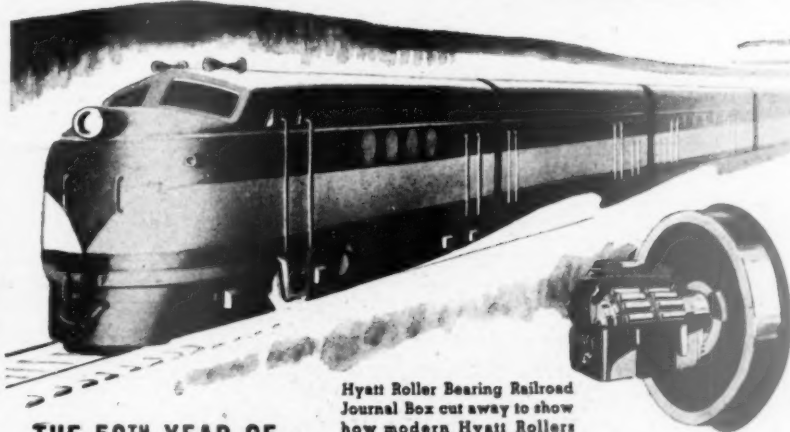
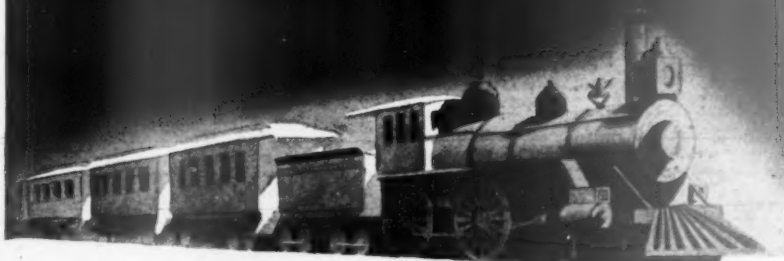
Yes, Hyatt Roller Bearings have been on the job for the railroads of America since 1892... the year John Wesley Hyatt, inventor of the roller bearing, founded his original company.

First, Hyatt Bearings served in line shaft boxes in railroad shops. Then in section cars, in freight handling trucks, and in cranes. Today, Hyatts are found wherever anti-friction bearings are used, especially in modern diesel locomotives and passenger car design, where Hyatt Roller Bearing Journal Boxes have achieved such widespread favor.

John Wesley Hyatt intended it that way. For his original incorporation papers read in part: "...and the objects for which this company is formed are the making, purchasing and selling of Roller Bearings and other articles for machinery of all kinds and railroad use."

So, in this year of our 50th Anniversary, among the greatest tributes to John Wesley Hyatt's foresight back in 1892 are the giant electric freight and passenger locomotives and streamlined trains moving smoothly over the rails on Hyatt Roller Bearings.

Also the extensive applications in automotive, agricultural and industrial equipment over these years... and the vital part Hyatts are playing today in our country's war machines on land, at sea and in the air. Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.



THE 50TH YEAR OF

HYATT ROLLER BEARINGS

Hyatt Roller Bearing Railroad Journal Box cut away to show how modern Hyatt Rollers handle the high speeds and heavy loads of today.

THE WAR—AND BUSINESS ABROAD

Strategists Eye Soviet's Far East

Japan's next move may be dictated by threat seen in Russia's vast modernization program on Pacific and Arctic fronts. And that goes far in explaining import of Aleutian battle.

The great battles of the war were being fought this week in the Don river valley where massed German troops equipped with every modern fighting device known to the Nazis struggled to maintain headway in their drive to cut off the Soviets from Russia's principal oil supplies in the Caucasus.

But the slow, steady progress of this drive forced strategists to take a look at Russia's Far Eastern flank and at Japanese moves which some observers believe are leading up to a Nipponese attack on Siberian Russia when Moscow is hardest pressed in the West.

Undeclared Warfare

Though they have never broken diplomatic relations, Japan and the Soviet Union have fought pitched battles along the Soviet-Manchukuo boundary at various times since the Japanese started their expansion program on the Asiatic mainland nearly eleven years ago.

At one time, when fighting along the Amur threatened to get out of hand, the Japanese were reported to have rushed up to a million troops to this colonial outpost, and Russia's forces on the northern side of the frontier were listed at 750,000, with a large brood of submarines at Vladivostok, and huge airdromes well filled with modern planes scattered at short intervals along the entire Manchukuo frontier from Vladivostok to Manchouli.

Garrisons Reported Intact

When Germany attacked Russia a little more than a year ago, Russia stoutly maintained that its Far Eastern garrisons need not be stripped of men or planes to fight the battles of the Western front. And Tokyo, with its eyes already on Singapore and the Indies, made no move to test Russia's Siberian defenses.

In the last few weeks, however, Japan has shown a new interest in its northern defenses. Chinese authorities report a steady influx of fresh Japanese troops into Manchukuo. Occupation of Attu, Agattu, and Kiska in the Aleutians is as much a threat to Russia's great naval and air base at Petropavlovsk and a supply line from the United States as it is at our own Alaskan bases.

Moscow has done more to develop this Pacific and Arctic frontier than is

generally recognized in the United States (map, page 14).

Fifteen years ago, Vladivostok was the only city of any importance in the whole area but today there are thriving industrial centers along the Amur, great, modern canneries on the Sea of Okhotsk, and thriving mining centers far north of the Arctic Circle. The Trans-Siberian Railway has been double-tracked. Vladivostok harbor has been modernized. Densely-populated Khabarovsk, on the Amur, has become Russia's Far Eastern arsenal. Small skyscrapers line its main street, and great factory buildings stretch along the river front.

Chain of Airfields

In its effort to make its Far Eastern territory self-sufficient, Moscow has built a chain of airfields which make it possible to fly to every center of population in the whole region. When gold was discovered in the great river valleys

that stretch north to the Arctic, roads were built to the mushroom cities that have sprung up along the Arctic coast, and power stations were built to speed up work in the mines, to help refrigerate the fish catch, and to provide electricity for home use.

One of these new highways stretches from the shores of the Okhotsk Sea to the Kolyma river. Describing a recent trip over this highway, Nicholas Mikhailov, in his book "Land of the Soviets," says:

"From the Okhotsk port, the Kolyma automobile road runs straight as an arrow for hundreds of miles through the mountains in a northerly direction. The car rushes along the smooth road which is marked with signals and speed indicators. Rivers choked with pebbles flow at the bottom of the valleys. They are walled with rock and spanned by bridges perfectly level with the road so that the car passes over them without a jolt. You come to miry peat-bogs in the depths of which geological ice is concealed and the road passes through these bogs over tens of thousands of unseen logs. There are so many berries that the grass looks either red or blue.

"Columns of lorries, tractors with trailers, passenger omnibuses, motorcycles and steam-rollers travel along the road, which is dotted with repair shops and refreshment stands for the drivers. Gas stations are met with every 30 miles along the road. Electric wires are carried through the mountains on iron poles. From the motor road one sees



BUCKET BRIGADE

In Buenos Aires (where it is now winter), long lines of people wait late into the night at gasoline and kerosene pumps to fill cans and bottles with heating and cooking fuel. Y.P.F., the government-controlled petroleum

monopoly which forced all United States oil companies out of the country several years ago, has oil wells in Argentina but still depends on imported supplies—now stopped by the tanker shortage and the submarine campaign—for more than half of its supplies.

THE RIGHT PEGS IN THE RIGHT HOLES



TODAY'S *No. 1 Problem* IN WAR PRODUCTION

● During the first days in school, our little boys and girls are earnestly fitting pegs and blocks into the holes *where they belong*. It's one of their earliest problems in school life.

Today, in Washington, the nation's key production men are engaged in a grim and all-important version of this same basic problem. Theirs is the gigantic task of *fitting the complicated pegs* of America's industrial and material resources into the largest war production program the world has ever known.

Into this complex problem, The Sisalkraft Co. has found the places where its products fit.

For over twenty years The Sisalkraft Co. has led in the development and production of reenforced, waterproof papers. For over twenty years, FIBREEN has been wrapping and protecting goods and materials, in transit and in storage.

Today FIBREEN continues to protect huge quantities of war materials

of all kinds — guarding them against damage from rain, dust, sea water or salt air during long exposure to all kinds of weather — keeping them in condition for use and action at destination.

FIBREEN fits—because it's durable, completely waterproof, amazingly strong. It's used as a wrap, as a cover, or as a bag — in almost any size or shape — for planes, tanks and trucks or small arms, medical supplies, delicate instruments and vital repair parts.

It further fits the war program because it is produced many times faster than woven fabrics, with only a small portion of the labor, and at far less cost. In addition, it releases such vital materials as burlap and canvas for other important war needs—and costs much less.

Other Sisalkraft papers are also doing their part. They are being used to

cure concrete floors in arms plants — or runways of flying fields — and to help build strategic military and access roads—providing a better cure, with fewer man-hours, and at lower cost.

And farmers are using Sisalkraft papers to help solve their major problem of storing grains and feeds — and to provide the silos they need so badly.

That's how the entire production of The Sisalkraft Co. today is confined to essential war uses.

If your product fits the war program — if you are concerned about the delivery of your products in the same excellent usable condition as they leave your factory—write us and see if FIBREEN is the answer to your problem. Tell us what you make and how you now pack it.

THE SISALKRAFT CO.

Manufacturers of Sisalkraft, Fibreen, Sisal-X, Sisaltape and Copper-Armored Sisalkraft

205 W. WACKER DRIVE - CHICAGO, ILL.
New York San Francisco London Sydney

In Canada Write to Alexander Murray & Co., Limited
at Montreal, Toronto, Halifax, Saint John,
Winnipeg, Vancouver



airdromes, meteorological stations, and chemical laboratories. Mines, ore-concentration works, hydro-electric stations have been constructed in the heart of the mountains.

"The road passes through new towns and villages with log and brick houses, garages, schools, and cyclists. One of these towns posted all over Western Russia posters carrying this advertisement:

"Dalstroy requires mining engineers and technical experts of all kinds, blast-ers, hydraulic engineers, hydrologists, builders, power engineers; electricians, ship-builders, electrical engineers; technologists in ceramics, cement production, and motor repairs; doctors, oculists, bacteriologists, surgeons, veterinary surgeons; economists and planners in the mining industry; managers of food and industrial enterprises; naval and coastal wireless operators, and postal and telegraph workers."

Three Advantageous Routes

With its full knowledge of this recent spectacular development of the Soviet Far East, the Foreign Policy Assn. (New York), in its most recent publication, points out that there are three main routes that might be shorter and less vulnerable to Axis attacks than the present routes to North Russia and through the Persian Gulf. These are:

"(1) A war plane ferry service from the West Coast of the United States, via Alaska, to Russia, and thence, also, to China.

"(2) A northern Burma Road, which would link the railroad above Edmonton, Canada, with the railhead at Irkutsk, in Siberia, by motor road. Each of the two segments could have its sea terminal on the 100-mile wide Bering Strait, where they could in turn be linked by alternative sea and air ferry services which could keep this route open all the year round. The length of this route is estimated at 5,800 miles, of which 2,150 lie in North America, and 3,650 in Siberia.

"(3) The Northern Sea route, opened by the Soviet Union in 1932, and linked with the three principal Siberian waterways—the Ob, the Lena, and the Yenisei—each several thousand miles in length. The Northern Sea route is the shortest sea passage from European Russia to Far Eastern Siberia."

Behind the Aleutian Battle

Americans will have a more intelligent understanding of the struggle for the Aleutians (BW—Jun.27'42,p42), of the importance of our new highway across Alaska (BW—Jun.20'42,p54), and of the possible Pacific supply routes to the Soviet Union and China if they realize how far Russia has gone in the development of its vast Far Eastern territory.

And they will understand why Tokyo,

sees a menace in this bridge across the top of the world, from the United States to the Soviet and Chinese bases from which the heart of the burgeoning Japanese Empire can be blasted with ease. This also explains the current uneasiness in Washington and Moscow lest Japan try to grab the Russian end of the bridge just when the two Allies are preparing to put it into service.

Budget Dented

Ottawa amends income tax provision as working wives begin general walkout. Retailers also gain point from ministry.

OTTAWA—War planners in the Canadian government had a foretaste this week of what happens when the profit motive, as an incentive to war production, is removed.

When the Canadian Finance Minister introduced his new budget a few weeks ago (BW—Jul.4'42,p39), one of its innovations (along with a scheme for forced savings) was a plan to tax all incomes over \$660 a year. As soon as the public discovered that working wives had to file separate returns, and that a married man's exemption was wiped out where husband and wife had separate incomes, there was a near stampede of married women to give up their jobs in factories and government war departments.



HOW SOON?

It's dollars to doughnuts that the thoughts uppermost in the mind of Major Gen. Chu Shih Ming, Chinese Military Attaché, as he visits an American bomber plant, have to do with how soon we can deliver how many.

• **Money Speaks**—It has been stopped now, but only after rushing through a hastily prepared amendment to the budget, stating specifically that tax exemptions for married persons have been restored to their former status. Less than two weeks were required to convince Finance Minister Isley that nothing as intangible as patriotism sufficed to induce people to work, even during a war emergency.

The proposed budget change would have meant that a husband whose wife was employed would begin paying taxes on all income over \$660 instead of benefitting from the \$1,500 exemption allowed to married men whose wives do not work.

All over the country, women workers began quitting as soon as the effect of the tax was realized. In Ottawa, hundreds of women put in their resignations from war department jobs. Only Isley's assurance that the tax change would be amended kept them from walking out.

• **Retailers Win**—Retailers also won a round from Finance Minister Isley, in their fight against the nuisance nature of new luxury taxes which were to be collected from consumers through the use of excise stamps, and which were to be shown separately on sales slips in order not to prejudice the public against the retail price ceilings. Retailers objected to the red tape involved, and Isley gave ground. As a result, the tax is shifted from the retail to the manufacturers' level on a number of commodities, but where this change is made the rate is increased from 25% to 35%.

On jewelry, artificial jewelry, china, cut glass, clocks and watches, and handbags the tax is left at the retail level, but the excise stamps are to be attached to the retailer's return to the government rather than to the article or the customer's sales slip. The price ceiling administration requires the retailer to show the ceiling price separately from the total of the ceiling price and the tax.

• **PRP in Canada**—Canadian manufacturers have until July 31 to bring themselves under Washington's new Production Requirements Plan or do without strategic materials from United States sources. They must file Form PD-25A with the priorities office at Ottawa, if they are using scarce materials at the rate of \$5,000 or more in three months. Smaller users will carry on under the previous priorities system.

The form to be used here is exactly the same as that used in the United States. As a result, Washington's PRP system and the new Allocations Classification System is extended northward as though there were no international boundary.

• **Labor Shortage**—Scarcity of farm labor threatens food supplies of farm origin for domestic consumption and the filling of British contracts. Butter may be

Patriotic volunteer committees of executives are already hard at work on this problem in 421 industrial centers.

The Industrial Section of the Conservation Division has a corps of technical advisers who are prepared to work with all types of industries.

A thoroughgoing Salvage program in a factory can not only help meet

the present emergency, but can help prepare that factory for its postwar operations through the elimination of once wasteful practices.

- 1 The first thing to do is to put some one individual in charge of Salvage in all departments of your business and give him not only the responsibility to act, but the authority to act.
- 2 The next thing to do is to get in touch with your local Industrial Salvage Committee and map out a detailed program with the materials and ideas that are available. Their program contains 17 simple steps.

If in any doubt, write or wire at once to the Conservation Division, War Production Board, Railroad Retirement Building, Washington, D. C.

This job is being tackled by a democratic nation through the volunteer efforts and initiative of democratically managed industrial concerns, rather than through directives or compulsion as it is done in Axis countries.

Every executive, every superintendent, every foreman and every worker in every plant can help.

The main thing is to get started now.



All unusable material, equipment, and stocks should be scrapped at once and put back into war production. Please read this message and act now.

D. M. Nelson

D. M. NELSON, CHAIRMAN, WAR PRODUCTION BOARD

This message approved by Conservation Division

WAR PRODUCTION BOARD

This advertisement paid for by the American Industries Salvage Committee (representing and with funds provided by a group of leading industrial concerns):

SCRAP FROM HOMES AND FARMS—As individuals, search your home from attic to basement. Search your garage. Look at the old familiar things in a new light. Do you need them—or can you get along without them? Your country needs every pound of scrap iron and steel, other metals, rubber, rags and burlap to provide the fighting materials our armed forces must have. Take your scrap to the nearest Salvage Depot—give it to a charity—or sell it to a Junk dealer. . . . If you live on a farm, consult your County War Board or your farm implement dealer. In any case, your scrap will flow back into the blood stream of our war production.



Springs with Stings

A while ago millions of friendly Wissco springs a year were striving only to make life better.

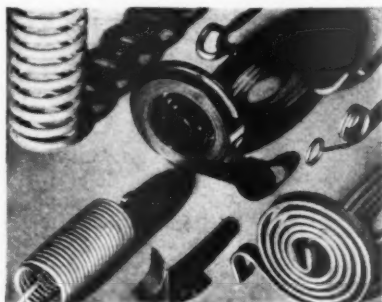
Now, fighting mad, they're helping to sting the Nazis and Japs—plenty!

Among other weapons, they are contributing their efficiency to—

Plane motors	Army trucks	Submarines
Instruments	Jeeps	Torpedoes
Parachutes	Scout cars	Machine guns
Trainers	Destroyers	Automatics
Tanks	Cruisers	Gun Carriages

The thousands of us here at our blast furnaces, open hearths, and in our seven mills are sweating day and night to help equip our sons and brothers, and yours, who are out there fighting for us. We know that's the quickest way to finish this job—and get back to making springs for a better world, at peace.

Important. If Wissco can help to speed your output for Victory, we are eager to help. Rush your priority rating to . . . Department B-7, Wickwire Spencer Steel Company, 500 Fifth Avenue, New York City.



In addition to springs, other Wissco products, now serving their country, are: Wire, wire rope, welded fabric, perforated metals, poultry netting, insect screen cloth, chain link fence, wire cloth, metal conveyor belts.

You can speed Victory by salvaging and selling old metal. The steel industry needs scrap!



WICKWIRE SPENCER STEEL COMPANY

Seven Plants Located in MASSACHUSETTS, NEW YORK, PENNSYLVANIA, ILLINOIS

COPYRIGHT 1942, WICKWIRE SPENCER STEEL COMPANY

one of the commodities to come under restrictions next. The new bonus of 6¢ a pound for butter fat is not believed to be adequate for keeping production to the needed level in view of the labor shortage. The price ceiling subsidy for milk, removed in May, will be restored in August or September.

In Ottawa and some other cities, food merchants have offered to close their stores one day a week to let their staffs go out and help with the harvest on condition that the Gordon price board pass an order to make the closing general, including corner fruit stores which sell some groceries. But the board is not yet prepared to go this far.

• **Wheat Price**—The Wheat Board is conferring with the government this week on the price to be fixed for wheat for domestic consumption to maintain the bread price ceiling. It is reported that the board proposes 77½¢, the base period high, 12½¢ below the guaranteed price to farmers for the new crop year starting Aug. 1. Bakers are asking the average price for the base period, 72¢. The price to be fixed depends in part on whether the government will agree to pay storage charges on wheat for domestic consumption.

Also to be decided is whether the difference between the selling price and the 90¢ which is paid to wheat growers will be borne by the Wheat Board or charged to the price ceiling subsidy fund of the Commodity Prices Stabilization Corp. Ceiling subsidies, incidentally, are now costing the treasury about \$500,000 a month—much less than anticipated when the subsidy system was adopted.

• **Wage Ceiling Enforcement**—Canada's wage ceiling, which was inaugurated to balance over-all price ceilings, has been widely infringed by employers in an effort to keep working forces up to strength. Although penalties of from \$100 to \$5,000 were provided for offenses against the ceiling law, there have been no prosecutions, mainly because the law was not believed enforceable. Last week teeth were added in a revision and consolidation of the wage-bonus order. Employers who increase wages are required to prove, in case of prosecution, that contravention of the new order is not involved.

At the same time, additional protection against employer discrimination is given to employees who supply information in connection with wage or bonus applications to the Wage Labor Board.

• **Plants to Close**—Increasing manpower shortage for war plants threatens to put some less essential nonwar plants out of operation in the next few months. Manpower requirements of armed forces and war industry for the next five months are placed at 250,000 men. The recent registry of unemployed males showed only about 60,000 employables out of a total of 80,000 jobless.

MARKETING

Sun Reckoning

New Chicago paper gives voluntary rebates to advertisers because its circulation failed to hit estimates for half year.

Advertisers of the Chicago Sun have been notified that they will receive rebates of 7.64% on their total expenditures for space in the weekday issues during the first half of 1942. This payment, estimated as approximately \$50,000, represents a voluntary refund of the difference between pre-publication circulation estimates (not guarantees) of 300,000 and actual audited circulation averaging 277,083 net paid from Jan. 1 through June 30.

• **A.B.C. Check-up**—The Audit Bureau of Circulations has completed its first check-up of Sun sales, and its statement will probably corroborate these figures. In its rebate letter to local advertisers, the Sun quoted its city and suburban circulation as daily 238,618, Sunday 283,867.

Sunday advertisers get no refund. In fact, if they were obligated to pay at the same milline rate for all circulation above the estimated 300,000, they could be assessed 50%, for the Sunday average net paid is reported as 450,835. The Sun's Sunday edition, priced a nickel against the Chicago Sunday Tribune's dime, in its first four months ran away with all estimates, by mid-March was reaching for 600,000. It was grand for the advertisers, but the paper was giving away its shirt. On Apr. 19 the price went up to a dime per copy and circulation responded by falling away to 341,000 in June, restoring it to step with advertising rates.

• **Circulation Problems**—Although the Sun's publisher, Silliman Evans, and its backer, Capt. Marshall Field, publicly disclaim any such motivation, all Chicago takes it for granted that their secondary, if not primary, object in founding the publication was to carve a new newspaper out of the hide of Col. Robert R. McCormick's Chicago Tribune, which at that time had the city's morning newsstands to itself. In consequence, it has been natural to assume that most tribulations of the Sun's circulation department might be traced to the Tribune Tower.

When the new morning newspaper published Vol. I, No. 1, on Dec. 4, 1941, the official carrier service of Chicago and suburbs would not handle it. The first chore of the Sun, was, therefore, to build its own parallel distributing organization. Staffed by novices,

AIR ASSOCIATES • AMERICAN AIR LINES • AMERICAN CHAIN & CABLE • AMERICAN GAS & ELECTRIC • AMERICAN EXPRESS • AMERICAN LA FRANCE FOAM • AMERICAN OPTICAL • AMERICAN STEEL FOUNDRIES • AMERICAN TEL & TEL • AMERICAN WATER WORKS • ANACONDA WIRE & CABLE • ATLAS TACK • ARMS • AUTOMATIC ELECTRIC • BABCOCK & WILCOX • BALTIMORE & OHIO • BAKELITE • BELKNAP • BELL AIRCRAFT • BENDIX AVIATION • BELL TELEPHONE LABORATORY • BLACK & DECKER • BOEING AIRPLANE • BRENNER AERONAUTICAL • BRIGGS & STRAW • BROWN KNOX • BORG WARNER • BRISTOL CO. • BUICK • BROWN INSTRUMENT • BROWN & SHARPE • BUCYRUS-ERIE • EDWARD G. BUDD • CATERPILLAR TRACTOR • CENTRAL GREYHOUND • CERTAIN-TEED PRODUCTS • CHAIN BELT • CHRYSLER • CARBORUNDUM • CARRIER • PHILIP CAREY • CARMICHAEL • CATERPILLAR • CONTINENTAL SCREW CO. • CROWN CAN • CHEVROLET • CONSOLIDATED EDISON • RAMP SHIPBUILDING • JOHN DEERE • DETROIT • EVOE & REYNOLDS • DIEHL • LAS AIRCRAFT • EASTMAN KODAK • FEDERAL ELECTRIC • FEDERAL ORD MOTOR • GENERAL ELECTRIC • GOULDS PUMPS • HARSHAW CHEMICAL • HURLEY MACHINE • HYGE • INGERSOLL RAND • INTERCHEMICAL PLANT • I.T.E. CIRCULATORS • JOHNSON MOTORS • JONES & LLOYD • KELLOGG • KEASBY & MATTISON • LEEDS & NORTHRUP • LEHIGH VALLEY • LACK • MANHATTAN RUBBER • JOSEPH • GLENN L. MARTIN • MAYTAG • MOUNTAIN PACIFIC • MURRAY CORPORATION • NEW YORK CENTRAL • NATIONAL • NEW YORK, NEW HAVEN & HARTFORD • AMERICAN AVIATION • NORTHERN • TIS ELEVATOR • PACKARD • PENNSYLVANIA RAILROAD • PARSONS • ROLEUM HEAT & POWER • PHILCO • R.C.A. • RED RIVER LUMBER • REPUBLIC STEEL • REYNOLDS • ARGENT • SEALED POWER • SAVIN • AIR • SOCOR • PERRY GYROSCOPE • S. • VULCAN • BURY • WESTE

YOU TOO CAN SAVE ON WAR-TIME PAPER WORK

Hundreds of leading business firms are now using VARI-TYPER on war work operations for reports, forms, parts lists, contracts, bulletins, instruction manuals and innumerable other kinds of paper work.

This electric office composing machine employs a large selection of changeable types and variable spacing -- gives more attractive and legible results, with even margins on both sides -- on less paper, more quickly and at lower cost. Ideal for preparing distinctive "original copy" on stencils, plates or paper for all sorts of duplicating machine operations or photo-offset.

Mail the coupon, or write on your business letterhead for free portfolio "How to Speed War Work" which includes actual Case Histories of savings, samples of VARI-TYPED work and a list of over 400 users. If in a Government position request special portfolio listing over 500 Federal locations where VARI-TYPER is "on duty."

There's a special Engineering Model particularly designed for typing on tracings and drawings to replace hand lettering and save draftsmen's time.

Text copy set on Vari-Typer

RALPH C. COXHEAD CORPORATION

333 SIXTH AVENUE • NEW YORK, N. Y.

☐ Please send me portfolio, "How to Speed War Work".

☐ Portfolio, "How Government Offices Are Using Vari-Typer".

Name..... Title.....

Company.....

Address.....

City..... State.....

this worked spottily. In February, the official carriers took on the Sun, reportedly on Col. McCormick's deciding that he could not forever lick Capt. Field's \$100,000,000.

• **Municipal Angle**—In Chicago, supervision of newsstands—and, therefore, of the relative displays accorded to the various newspapers—is the responsibility of the city's Department of Public Works. Despite its militancy against the New Deal, the Tribune has been singularly unallergic to the Kelly-Nash Democratic administration of Chicago and Cook County. The Sun got a place on all newsstands, but during the hours when morning papers get their big sale, the Trib averaged five times the Sun's display. About July 1, the Sun moved up to equal display, and consequently is counting on greatly increased newsstand sales.

Nevertheless the paper's management is playing its circulation cards close to its belt. New advertising rate cards for the paper, effective July 1, are currently being issued. These were figured by applying the 7.64% discount to previous rates, then setting each rate to the nearest even cent. The reduced rates apply to all daily advertising and to Sunday black-and-white; Sunday supplement, comics, color, and rotogravure remain at former levels.

• **Disappointment Is Denied**—Messrs. Field and Evans protest that they did not expect the new venture to make money in its early months, hence are not disappointed that they are still using red ink. They assert their solid satisfaction in the Sun's record to date, are especially proud of their paper's claim to being the biggest new newspaper in the history of American publishing. They point to the A.B.C. figures for the first audit years of the two biggest papers that have previously started from scratch in the past two decades. Their statistics show that the New York Daily News circulation reached 249,000 in 1920 and the Chicago Times 142,000 in 1930.

Certainly the Sun's big-league promotion program has brought results. The publishers claim an even more substantial advantage advertising-wise. Looking back to 1920 and 1930 again, they compare the Sun's 3,643,000 lines in its first six months with the full first-year showings of the New York Daily News (1,723,000 lines) and the Chicago Times (4,630,000).

• **Showing in Chicago**—Another current brag of Sun space salesmen is the paper's relative showing in the Chicago market. In terms of percentage of advertising lineage published—not dollars of advertising revenue—in all Chicago papers, the Sun has run between 11% and 16% of the market. The dollar showing would be far lower, is estimated around 6.5% of the total dollar volume in Chicago papers.



HOME-IN-A-BOX

Variously dubbed the "Shavetail's Dream" and "Second Louie's Delight," a roomfull of furniture which may be packed into a single packing case is now offered by Abraham & Straus, Brooklyn, as the Cross-Country combination. Ingeniously nested within the two halves of its packing case are two end-tables and a



coffee table (which come knocked down), a desk plus a five-drawer chest of Honduras mahogany. The case, when packed, weighs about 450 lb. and is 52 in. high. Standard equipment (listed above) sells for \$89.50 but there is enough space in the drawers for the owner to place such extras as two folding chairs and a pair of bric-a-brac lamps which have collapsible shades.



The Sun's biggest space users today are, in the main, the same local advertisers who hold corresponding rank in the Tribune. These are the big State St. department and specialty stores.

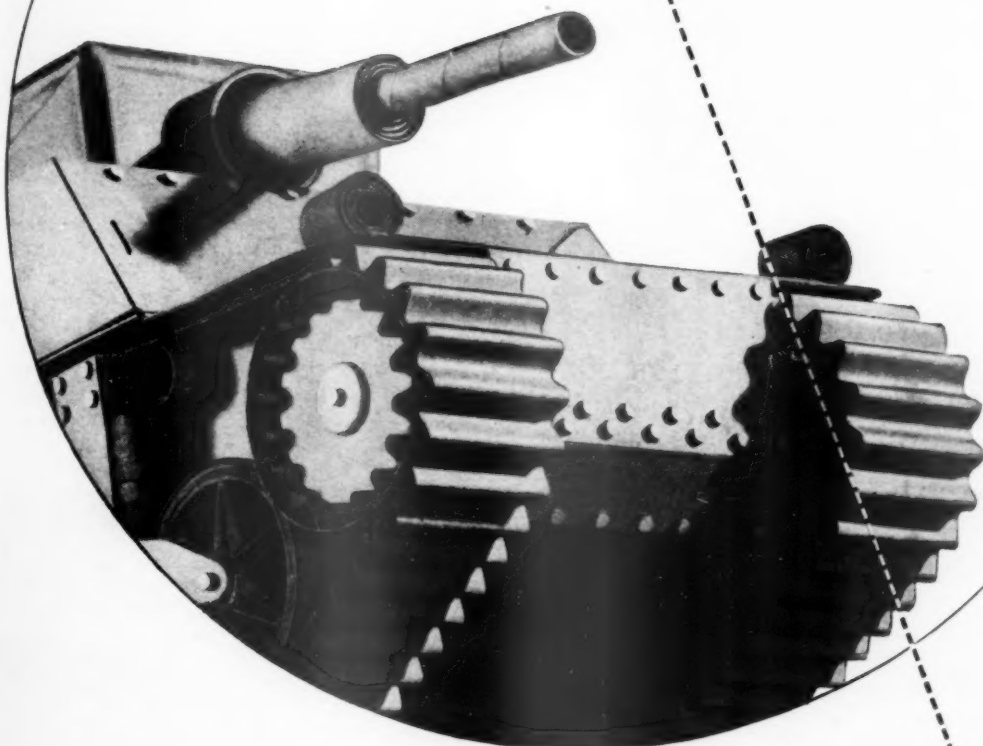
• **Aggressive Promotion**—Evident from the Sun's currently ambitious and aggressive promotion program is its intention not only to hold its present number of readers but also to build its circulation against a future rate raise. Two weeks ago the paper's promotion manager, Jim Mulroy, hit the jackpot. When the Nazis destroyed Lidice in retribution for the assassination of Heydrich, the opportunity was too good to miss.

Pulling its strong political wires through Illinois Federal Housing Ad-

ministrator Gael Sullivan, former secretary to Mayor Ed Kelly, the paper found an unincorporated hamlet near Joliet, Ill., that was willing to be rechristened Lidice. By the time Mulroy completed his build-up, Radio Notable Clifton Fadiman was on hand to serve as master of ceremonies, gratis. Wendell Willkie made the principal speech. Official representatives of the United Nations made brief talks. All of this drew a crowd, estimated at 50,000 even by rival Chicago papers.

• **Big Radio Hookup**—It got a half hour on the National Broadcasting Co.'s nationwide hookup plus shortwave, and was recorded by the British Broadcasting Corp. for beaming from London to Czecho-Slovakia. This week sees a more

WAR IS FOUGHT WITH PACKAGES TOO!



• Special packages—designed to meet Army, Navy or WPB specifications in addition to ordinary requirements. Packages designed to protect and speed the flow of munitions and supplies.

Properly conceived, these wartime packages expedite the handling of war products, cut out costly waste and damage, save time and materials—and costs.

To all prime and sub contractors producing war goods, we offer our 2 years' experience in military packaging, our close working knowledge of government requirements. This

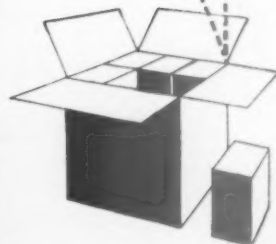
is specialized experience for specialized work—and we have a staff and facilities for it.

In one organization, Container Corporation combines the manufacture of paperboards and of both folding cartons and shipping containers—a full perspective on the complete packaging job. Our plants are located strategically to serve busy areas. Our laboratory and manufacturing facilities are geared to the kind of production needed for the war program; our people intimately acquainted with the special demands of this work. We would like to discuss your war work with you.

CONTAINER CORPORATION OF AMERICA

111 West Washington Street, Chicago, and 22 other strategically located plants and offices

EVERYTHING PAPERBOARD FOR EVERYTHING PACKED
FOLDING CARTONS • BOXBOARDS • CORRUGATED AND SOLID-FIBRE SHIPPING CASES



expensive and sustained promotion get under way. First step, not officially connected with the Sun, was taken when Marshall Field's friend, John W. Clarke, La Salle Street broker, got low-power Chicago station WHIP renovated, renamed WJWC, and stepped up to 5,000 watts.

Meanwhile the paper hired Chicago's leading foreign news commentator, Clifton Utley, equipped him with a staff of eight and a studio on an upper floor where NBC's station WMAQ once held forth. Mr. Utley becomes editor of the "Air Edition of The Chicago Sun," with 18 broadcast periods—expected soon to be 22—every hour on the half hour for from five to fifteen minutes on WJWC. Expectation is that Utley & Co. can attract a big enough audience to make WJWC worth its cost.

• **More Readers Than PM**—Compared to Marshall Field's first newspaper venture, the advertisingless New York City tabloid, PM, the Chicago Sun's circulation record is A-1. On its second anniversary, early this summer, PM announced that its daily circulation was running to an average of about 150,000. That's still sadly below the break-even point—originally estimated at 200,000, later revised upward to nearly 300,000 (BW—Oct. 12'40, p. 38). But it's probably about double the circulation which PM had during the summer of 1940.

Beauty's Beast

WPB's order on cosmetics subjects the boys in Washington to severe digs. Liquid hose curb a particular sore point.

Beauty came to grips with the war this week—and the war won out. Morale or no morale, the War Production Board finally worked around to issuing its long-awaited Order L-181, the first general crackdown on the cosmetic and toilet goods industry.

• **Fewer Sizes, and Larger**—Principal object of the order—though WPB doesn't say it in so many words—is to slash the industry's use of packaging materials and transportation space. This is effected in two ways: by limiting each product to three sizes of consumer containers—only exception is perfume, which is allowed four; by curtailing production of marketable units so that a manufacturer can keep his volume up only by concentrating on larger sizes.

Though the order is also framed to cut the use of such strategic cosmetic and toiletry ingredients as alcohol, glycerin, and tin, zinc, and titanium oxide it's pretty evident that this was secondary. For one thing, use of these materi-

als is already pretty well controlled through priorities and limitation orders. The industry's use of alcohol, for example, was cut 30% some time ago in a specific alcohol order.

• **Various Categories**—WPB has classified all cosmetics in three lists. Production of items on List 1 is unrestricted. Items on List 2 may be produced and sold during the 365 days following the effective date of the order (July 17) up to 100% of the quantity and 90% of the marketable units in which they were produced and sold during the calendar year 1941. List 3 items are restricted to 80% of 1941 quantity, 72% of 1941 marketable units. Quantity is determined by weight for solids and semisolids, by volume for liquids.

L-181 and its accompanying press release give no inkling that any considerations other than conservation of materials dictated the make up of the order. Actually, however, it is known that WPB attempted to evaluate the relative essentiality of the various cosmetics and toiletries involved. Thus, in classifying a product, WPB took into consideration the quantity of packaging materials and transportation space required, the amount of strategic ingredients used in its manufacture, and whether or not a cut in its production will leave America's femininity ungroomed and demoralized.

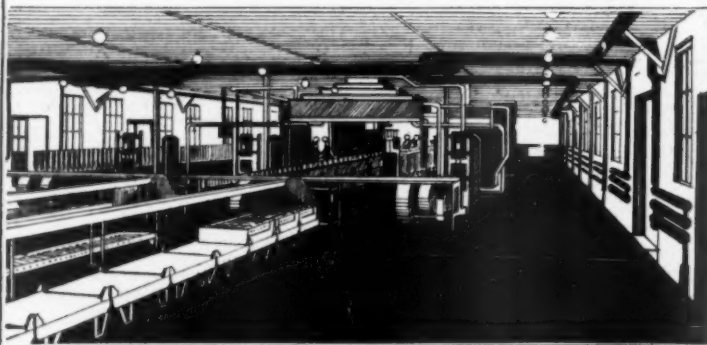
• **How Were They Picked?**—On this basis, the powers-that-be decided that toilet water, deodorants, eyeshadow, face powder, lipstick, and hair straightener should go on List 2, that after-shave lotion, bubble baths, eyelash curlers, mouth washes, and nail polish should take the deeper cuts of List 3.

General industry opinion is that List 1, which allows unrestricted production, has little practical significance. It consists entirely of items which appear also on List 2 and which can be produced ad infinitum only when they do not use certain critical ingredients. Since most talcum powder on the market contains zinc or titanium oxide, and most soap shampoo contains coconut oil, alcohol, or added glycerin, List 1 obviously is intended chiefly as an incentive to manufacturers to revamp their formulas.

• **One Major Casualty**—Industries rarely receive WPB orders, uncritically, and the cosmetic trade is no exception. Thus far, one squawk has drowned out all the others. L-181 bans entirely all products which were not on the market during the year immediately prior to the issuance of the order. This practically washes up the brand new—and extremely profitable—countrywide market for liquid stockings.

About 99% of the liquid stocking business has sprung up in the past few months, in the wake of the silk and nylon shortages. This time last year, there were only two or three small brands on the market; now, virtually

QUICK ACTION ON DESIGN AND CONSTRUCTION



SANDERSON & PORTER offer engineering services
in connection with

DESIGN • CONSTRUCTION
MANAGEMENT PROBLEMS • FINANCING
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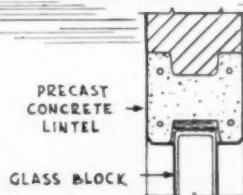
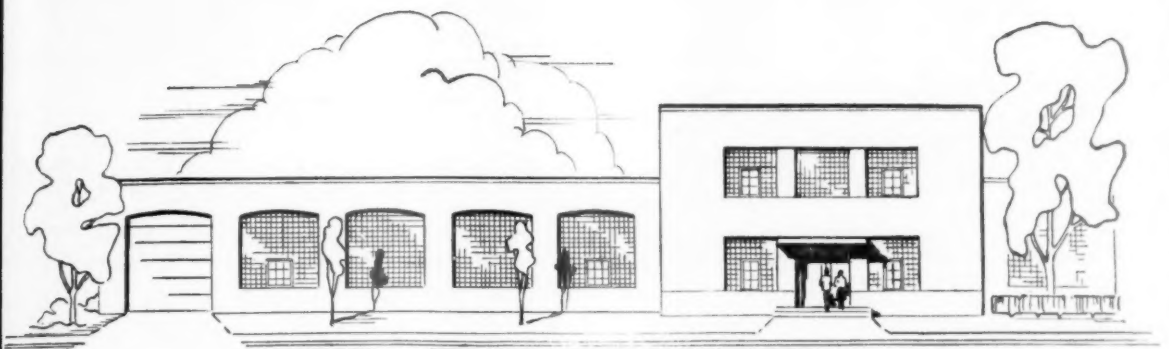
CHICAGO

52 WILLIAM STREET
NEW YORK

SAN FRANCISCO



Today's No. 1 Material For *Daylighting* New and Rehabilitated War Plants



Head detail at right shows new precast concrete lintel for glass block panel construction.

HEAD DETAIL

"Victory-designed" war plants like this can be built with minimum metal by using INSULUX Glass Block in arched head masonry opening. Glass block panels provide efficient daylighting with complete privacy and fuel-saving insulation.

INSULUX GLASS BLOCK



— SAVE METAL

INSULUX daylight panels under 50 sq. ft. in area use no metal—larger panels use very little. INSULUX releases metal for war production.



— SAVE FUEL

INSULUX daylight panels have high insulation value . . . save on initial cost and operating expense of heating.



— SAVE POWER

INSULUX Glass Block transmit ample daylight . . . direct it deep into interior . . . diffuse light without objectionable glare. Less artificial lighting is needed.

PROVIDE PROTECTION against prying eyes and saboteurs. INSULUX is translucent but not transparent . . . forms a sturdy wall hard to break through.

ARE ECONOMICAL— still selling at prewar prices. INSULUX brings substantial savings on maintenance and operating expenses.

ARE AVAILABLE for immediate delivery from stocks in principal cities. INSULUX is easily and quickly erected by bricklayers.

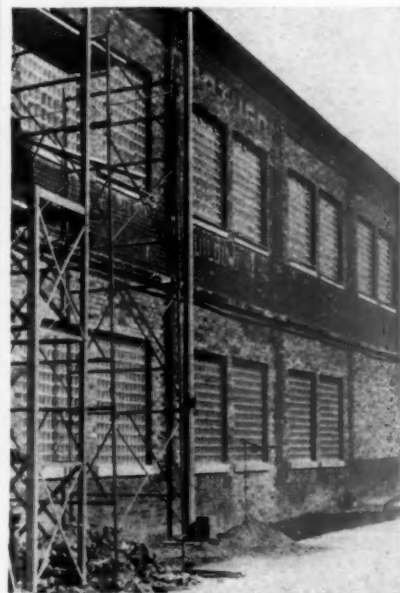
ARE FIREPROOF— noncombustible.

WRITE FOR THIS BOOK

This new "Alternate Details" book shows how to use INSULUX in construction of new plants and remodeling of buildings for war work with a minimum of critical materials. Owens-Illinois Glass Company, Dept. 63, INSULUX Products Division, Ohio Building, Toledo, Ohio.



OWENS-ILLINOIS
INSULUX
GLASS BLOCK



To speed war production, old buildings like this 40-year-old Ohio factory can be rehabilitated with INSULUX Glass Block. Little or no metal needed for panels. INSULUX is fireproof—noncombustible. Conversion with INSULUX saves time and materials.

every major cosmetic maker has one on sale or in the making.

● **Possibility of Appeals**—Indications are that WPB may relax its new product ban, particularly in hardship cases like liquid stockings. If a general ruling proves too complicated, the relaxation will be handled through individual company appeals.

How hard a company will be hit by L-181 depends, of course, on where its business lies. Even large outfits with diversified lines will have to cut down some, though they will suffer least. The small manufacturer who has specialized, say, in selling bubble baths in ten-cent sizes to the syndicate trade will be pretty well beached.

● **Effect of Rule on Sizes**—While the limitation on sizes probably will not work much hardship on most manufacturers, a few companies, which have built a business on small sizes, may elect to take a cut in volume rather than go into larger containers.

This, obviously, wouldn't please Washington. By cutting the number of marketable units but not specifying what container sizes shall be used, WPB is delving in subtle psychology. Idea is that a manufacturer shall look at the order and think, "Aha—How can I get around this? Why, by putting my stuff in bigger containers there's nothing to it." If this technique fails, the authorities are ready to try more direct means.

WPB probably has let itself in for a lot of grief by considering a product's essentiality as well as its consumption of critical materials at this stage in the game. Nobody is going to convince a maker of bath oil, for example, that his product is less essential than bath salts.

● **Two Surveys Tried**—The basis on which WPB determined essentiality is not certain, though it's known that Washington conducted two surveys on the subject of what cosmetics women do and don't consider most important. One was circulated among Office of Price Administration stenographers and other female personnel, the other was a questionnaire sent out to some 15 beauty editors (whom it put neatly on the hot seat).

The cosmetic industry's troubles do not emanate solely from WPB. Notably, the trade has been exerting itself recently to counteract the effects of a whispering campaign of uncertain origin which has had women asking their druggists, hairdressers, and such if it isn't unpatriotic to buy cosmetics because they all use raw materials needed for the war program.

● **Difficult Problem**—Apparently, a disconcertingly large number of females have indicated their willingness to give up wrinkle eradicators, nail polish, and whatnot if it will help sock the Axis. The industry has been hard put to lay these rumors without bringing them out into the open.



IN THE ARMY NOW

More effective than words in explaining to store purchasers and other manufacturers the limited quantities of

merchandise available for use is a display of Fieldcrest Domestic used as war supplies at the showroom of the manufacturing division of Marshall Field & Co. in New York.

Rugs of Cotton

Karastan Mills bring out new product, which had been in laboratory for some time, as use of wool is curtailed.

Buyers at Chicago's floor coverings show, which ended last week, found merchandise of their accustomed qualities scarce. Those few dealers who had not stocked up with extra-long inventories had a little trouble getting all their orders booked, since mills are restricted to 25% as much wool as last year.

● **Cotton Substitute**—Prowling for substitutes, they placed orders for large quantities of a new-type cotton rug which the Marshall Field & Co. retail store was currently featuring in its corner window at Wabash and Randolph.

Maker of the new line is Karastan Rug Mills, a Marshall Field manufacturing division. Karastan was especially hard hit by wool rationing because much of the wool it can get is not adapted to its specialty, domestic reproductions of fine Orientals. The firm's dealers look to it for merchandise to fit smart decorative schemes—and there obviously was not going to be enough of this to go around.

● **Market Broadens**—Cotton rugs used to be made only for the low-income market, and there is still a tremendous yardage of them made to be purchased by customers as a cheap, less desirable substitute for wool. But, in recent years, many cotton rugs of attractive texture and pattern have been developed.

Karastan had for years been desul-

torily experimenting with weaving cotton rugs on looms designed for wool. Its tests had led to some mild encouragement.

● **Price Not Main Factor**—Now, spurred by necessity, Karastan mill experts have speeded up their development program. The goal was set not as finding a low-priced substitute, but rather as devising an all-cotton floor covering that would retain the distinctive advantages of wool, while probably having some advantages peculiar to cotton.

The researchers eventually came up with a product that is claimed to meet these difficult specifications. In general appearance, especially texture, the all-cotton rugs are difficult to distinguish from all-wool. Weight is approximately 50% heavier than for wool rugs of comparable appearance, making the cotton rugs less likely to scuff.

● **Passes Washing Tests**—After extensive tests in the laboratories of major soap makers, the cotton rugs are pronounced color fast through many washings, completely washable, and desirably free from straining under usual household liquids. Using precisely the right twist in spinning long-staple cotton is claimed to prevent shedding off of fibre.

Precaution to be observed in washing is that excess water be removed from the rugs by agitation, not wringing, and that they not be put through ironing rolls lest the nap mat down. The maker's best guess is that they will wear quite as long as wool rugs of equivalent weight and appearance.

● **Prices Are Lower**—The new rugs come in four styles, two of these patterned and the other two in plain textures. Retail prices approximate 50% of Karastan's best Oriental reproductions, average \$92 for a 9 x 12 ft. rug.

Can You Do More?

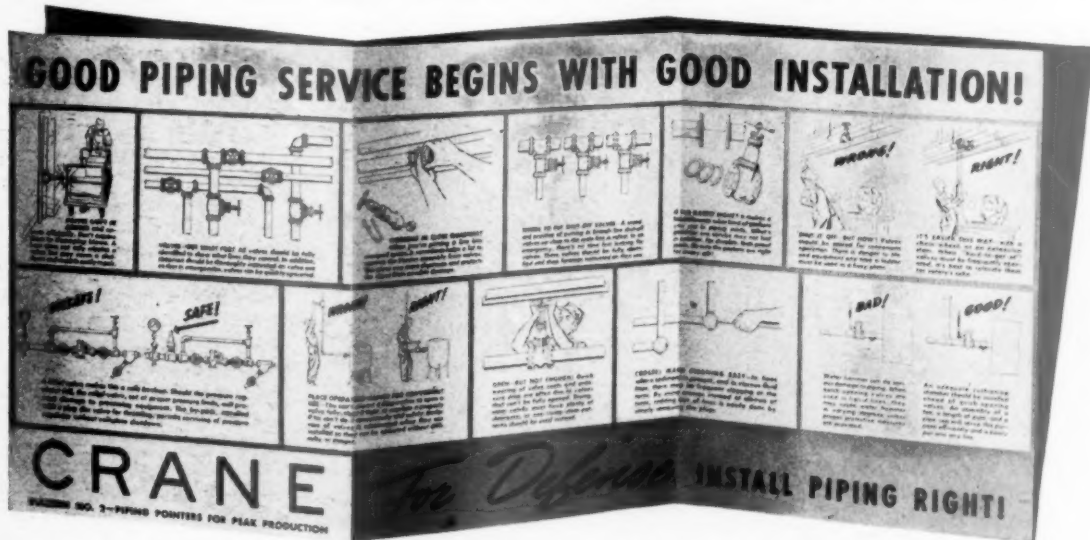
Many Plants are Finding The Answer Here . . .

- to Conserve Critical Materials
- to Make Present Equipment Last Longer
- to Reduce Production Delays
- to Maintain Piping Efficiency
- to Train New Maintenance Men
- to Standardize Maintenance Practice

—In Crane "Piping Pointers"—a series of shop bulletins designed for the present emergency. Months before "Pearl Harbor," Crane Co. foresaw the opportunity and eventual need for this service—to help in conserving operating equipment and keep it at peak efficiency in the face of gigantic demands—to assist in training the thousands of maintenance workers re-

quired with round the clock operation. Since that time, these bulletins have been aiding more and more plants in getting greater utility from valves and fittings, and have been making a tough training job easier.

"Piping Pointers"—one of Crane Co.'s contributions to the Victory effort—are offered *free*—on request. Is your plant taking advantage of this timely service?



"Piping Pointers" are not technical treatises. They are filled with important "rights and wrongs" and "hows and whys" for men who swing the wrenches—the men upon whom industry today depends more than ever to keep power and processing lines flowing.

CRANE

CRANE CO., GENERAL OFFICES:
836 SOUTH MICHIGAN AVENUE, CHICAGO
VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES AND WHOLESALERS IN ALL MARKETS



Lift the Film of "NIGHT BLINDNESS" from your Plant

In war plants all over the land **MILLER Continuous Wireway Fluorescent Lighting System** has raised the sights on production by lifting the level of illumination to 50 foot candles, 100 or higher . . .

99,000 out of 100,000 war plants have inadequate lighting for fast, precision production . . . according to the National Better Light Better Sight Bureau.

Inability to see clearly and sharply at all times can be just as tragic a liability to war workers as "Night Blindness" is to fighting pilots.

Today nothing less than ideal "seeing" conditions in your plant, 24 hours

around the clock, should satisfy you.

MILLER 50 FOOT CANDLER and **100 FOOT CANDLER** will put 50 foot candles, 100 or better of man-made daylight on every working surface in your plant. **MILLER TROFFERS** will duplicate that performance in your plant offices and drafting room.

They will accomplish this at an economy and speed of installation that will pleasantly surprise you.

The sooner you get a **MILLER** engineer on the scene to give you an analysis of *exactly* the working illumination you need today, the sooner you can get busy and beat your best war production promise. *Write or wire today.* (Representatives in principal cities.)

BUY U. S. WAR BONDS



MILLER
50 FOOT CANDLER
100 FOOT CANDLER
MILLER TROFFERS
Continuous Wireway Fluorescent
Lighting Systems

THE MILLER COMPANY
MERIDEN, CONN.

Pioneers in Good Lighting Since 1864

• **MILLER** offers a complete line of filament and fluorescent lighting equipment.

No Singing War

Failure of hit songs to materialize is result partly of current psychology and partly long-term trend in music.

There has never been a major American war that didn't produce at least one major song.

"Yankee Doodle" was a Revolutionary favorite. "The Star Spangled Banner" was inspired by, and written during the War of 1812. "Just Before the Battle Mother" and "Tenting on the Old Camp Ground" topped a sizable list of Civil War hits. Contributions from the World War—"Over There," "Till We Meet Again," "Madelon," etc.—fill a veritable treasure chest.

• **No Hits Yet**—But this war, so far at least, is singularly different. Excepting perhaps the "White Cliffs of Dover," there's hardly been a number, either here or in England, that music men would care to nominate for everlasting fame.

The 50-odd topnotch music publishers aren't surprised, however, about the songless aspect of this conflict. For one thing, this isn't an infantry war with masses of marching men generating the rhythm that, in 1918, spontaneously produced "Hinky-dinky Parlez-vous" on the fields of France.

And as important as anything is the fact that there's been no really stirring U. S. victory to make the dynamic war spirit which in turn would "make" a war song. For popular music—if its stylistic changes and marketing conditions can be correlated with anything—is the product of mental association.

• **Geared to the Times**—On that basis, the publishing and selling of popular music is irrevocably tied to the apron strings of a machine age which is not only substituting the jukebox for the piano and rug-cutting for the waltz, but vastly shortening the life of songs and changing their style. It's possible, of course, that this war will yet bring forth another "Smiles." But it's extremely dubious whether this period, as a whole, will stack up to that fertile interval from 1910-25 when "Beautiful Ohio," "Dardanella," "Margie," and "Melancholy Baby" rolled off the presses year in, year out.

Music publishing is like no other industry in this world. Songs, unlike books or autos, don't gather fame from word-of-mouth reports, nor can they be advertised for their "secret ingredients" like toothpaste. In order to make a hit, the publisher first has to give his product away so that the public will warm up to it. Only then will it sell—providing the mental associations are propitious. Bad news can kill a fine song. Good news

will often boost a sleeper into the big-time.

• **Grown-up But Unsophisticated**—During the 1910-25 heyday, the mental associations were perfect for a financial sweep. America, now past its last frontier, was cozily rich, but still corny enough to delight in picnics and family parties. Big houses, amply suited to pianos, were the order of the day. In that setting of unsophisticated gayety, songwriters turned out hit ballads by the score.

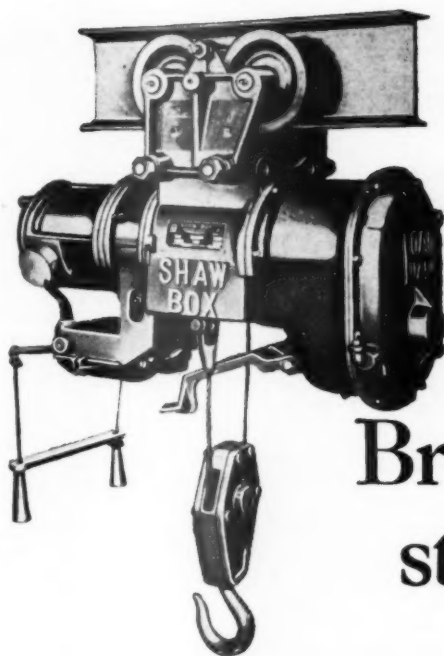
Mindful of the lush market all around them, the music publishers started putting order into what admittedly had been a two-bit, cut-throat industry. In 1914 they teamed up with the composers and authors to form the American Society of Composers, Authors and Publishers for the purpose of stopping the pilfering of performing rights. Three years later they launched Music Publishers' Protective Assn. to guard mechanical rights. Sheet music prices meantime were boosted to bring higher profits, and pretty soon the publishers moved out of their 14th St. cubbyholes into the gilt and mahogany of upper Broadway.

• **Enter the Jazz Age**—But even before this era was half-way over, the seeds of change were sprouting. Americans moved into the city, rented apartments too small for pianos, and backyards too cramped for picnics. The mechanical hum of factory work somehow found its voice in Negro improvisations. Paid-for good times (dance halls, etc.) rather than family get-togethers became the order of the day. The jazz age had arrived.

The end of the golden era was marked by the advent of the talking picture in the latter part of the 1920's. Vaudeville tottered, song-plugging became more difficult, and such movie giants as Warner Bros., Paramount, and Metro-Goldwyn started gobbling up the publishers in an effort to provide musical fodder (and more revenue) for their films.

• **Rights Rather Than Copies**—With the coming of talking pictures and—a few years later—radio, sheet music sales dropped off sadly. From that day on, "publishing" was such mainly in a legal sense. The big money now came from a complicated licensing of "rights"—that is, renting out the privilege to sing or record music. Whereas a sheet music sale of 1,000,000 had not been uncommon, sales of less than half that figure came to be considered big. (The gross margin on a sheet ranges from 10¢ to 15¢ per copy.)

Thus geared to the mechanical-urban age, the publishers moved into the depression and ran smack into another change. The depression produced none of the pleasant memories, none of the nostalgia of 1910-25, and the songs showed it. Lyrics became mere afterthoughts to snappy dance tempos, and



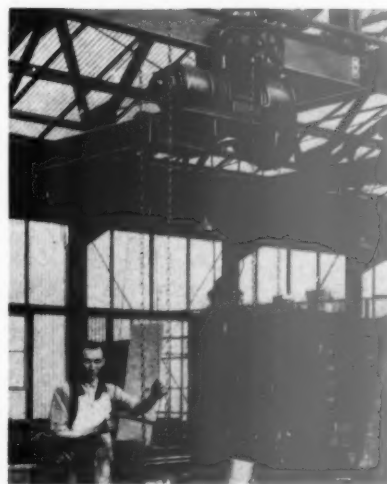
Brute for strength...

YET this rugged hoist embodies all that is fine in design and engineering. For the tough round-the-clock job, for trouble-free service and for versatile adaptability, you can do no better than install a Shaw-Box Load Lifter Hoist.

Here are some features:

1. "One-point" lubrication.
2. Hyatt Roller Bearings and Ball Bearing Motor.
3. Safety upper stop; lower blocks; sure brakes.
4. Two-gear reduction drive; sealed against oil leaks; steel interchangeable suspension.

'Load Lifter' electric hoists are built with lifting capacities of 500 lbs. to 40,000 lbs. in all combinations required for industrial lifting necessities. They are adaptable to almost every working condition within their capacities. Send for Bulletin 350.



'LOAD LIFTER' Hoists

**MANNING, MAXWELL & MOORE, INC.
MUSKEGON, MICHIGAN**

Builders of 'Shaw-Box' Cranes, 'Budgit' and 'Load-Lifter' Hoists and other lifting specialties. Makers of Ashcroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' industrial instruments.

the latter, in turn, produced the stylized orchestra. Dance band stylization has subsequently revolutionized song writing.

• **Breaks—Good and Bad**—But the depression didn't kill the publishers. Radio kept growing all through the gloomy years, paying more and more for license privileges. Then came the jukebox and the rebirth of the phonograph. The publishers got a new lease on life.

Although the row between the radio industry and ASCAP (BW—Aug. 17 '40, p. 30), cramped this upturn, profits have subsequently been revived.

Now it's the war that's the big problem. There isn't enough shellac to make records for jukeboxes. There isn't enough rubber to keep dance bands touring. And the draft has depleted some of the youthful market.

Nor do the publishers anticipate that the revival of staying-at-home will bring back the guitar, the mandolin, or the family quartet, although it might mean more emphasis on music in radio and motion pictures. For one thing, nobody's sure there will be a lot more staying-at-home, despite rationing. Big night clubs, located near transit lines, certainly expect to scoop up considerable patronage. And the night spots that are more remotely located are installing cab services to entice patrons.

• **Sentimental Backlog**—No matter what happens, music attuned to mechanization is here to stay, and with it the reliance on "rights" money instead of publishing money. That may produce new publishers with smaller capitalization, cut down the size of the bigsters.

Within recent years they've been buying up the copyrights to such golden-era tunes as "Melancholy Baby," thereby building up great libraries (known as catalogues). In the waves of nostalgia that sweep over an aging population, the catalogues will provide a steady source of revenue to supplement the intake from shorter-lived current hits.

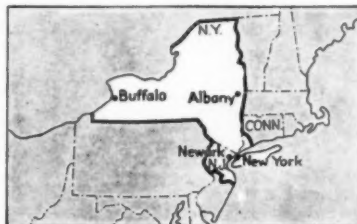
MORE RELIEF ON PRICES

Original Office of Price Administration attitude was that, under the General Maximum Price Regulation, a seller had to give the consumer as much for his money as he did in March. If a manufacturer or retailer threw in a package of blades with every safety razor sold during March, for example, he was obliged to continue the offer.

Now, as part of the general program for relieving hardship cases (BW—Jul. 18 '42, p. 14), OPA has ruled that any seller, other than a retailer, who offered a special deal or other price reduction which did not continue in effect for more than four months may raise his ceiling to meet the highest price at which he delivered the commodity during the 30 days preceding the reduction. Retailers also are afforded relief.

The Regional Market Outlook

NEW YORK (Income Index—141.8; month ago—139.9; year ago—118.9)—As the autumn manufacturing season draws near, apparel trades in New York and other district cities are unhappy over prospects. Of late, clothing sales have been "slow" in the nation generally, piling up large inventories in the stores. This may cut fall wholesale demand. Even if heavy orders are forthcoming, producers fear that shortages of materials will limit operations.



52,153 sq. mi.

pop. 17,129,265

ATLANTA (Income Index—165.8; month ago—162.8; year ago—136.4)—Although coming gains may not quite match the sharp index boosts of recent months, income in this Reserve district is likely to continue gaining faster than the national average.

On the industrial side, war awards still are pouring in, the most recent going to Gulfport, Miss., Courtland and Gadsden, Ala., Kingsport, Tenn., and Boca Raton, Fla. Right now, industrial employment gains over a year ago are running above average in most sections, especially in Alabama. Too, heavy troop concentrations in this southern region are lifting retail potentials near numerous camp sites.

Agriculturally, cotton conditions for the most part is improved over last year, despite poor prospects in Alabama and the lower Mississippi delta. Prices now are above those at 1941 harvest time, and may go higher if Congress

votes to heed demands for parity loans. Corn, oats, and hay crops are apt to be unchanged, but 1,000,000 more acres of peanuts will be harvested. Right now, Florida's tomatoes appear to be the best in years, and Louisiana bean shipments are up 50% over a year ago. War demand for south Georgia-north Florida rosin and turpentine has pushed prices up as much as 50%. And this season's Florida citrus quotations averaged the best in five years.

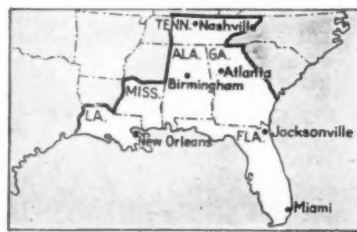
Either way, New York City unemployment threatens to rise. With metropolitan purchasing power already cut by heavy taxes on high incomes, the city still looks to Washington for relief via war contracts (BW—Jul. 18 '42, p. 35).

In most other industrial centers—in northern New Jersey, central New York, southwestern Connecticut, and Long Island—armament payrolls are continually rising, and as rapidly as in the nation. Jobseeker rolls, already low, are sinking, and labor shortages threaten in Buffalo, Schenectady, Bridgeport, and in rural areas.

Farmers are paying a third more for hands than last year. But receipts are higher. And July 1 estimates of the 1942 hay crop run 25% larger than last year's, which was hit by drought. Pasturage improvement is even sharper. Increased feed supplies will serve both to reduce expenses and to increase dairy and poultry output and income.

votes to heed demands for parity loans.

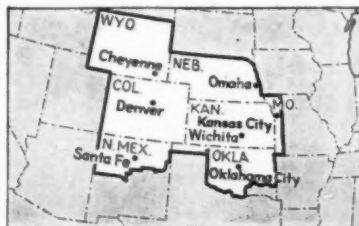
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247,778 sq. mi.

pop. 12,597,347

KANSAS CITY (Income Index—144.3; month ago—141.7; year ago—115.0)—Effects of war project awards on industrial employment here are now accelerating, and new job placements are mounting. Construction progress is rapid at such places as De Soto and Salina, Kan., Cheyenne, Wyo., Lincoln, Neb., and Denver, Colo. And additional awards, promising further expansion, continue to flow into the region. Construction contracts in the



480,537 sq. mi.

pop. 7,855,397

eastern states of the district are up more sharply over 1941 than the nation's.

Farm receipts also are lifting this Reserve area's current income index, running some 50% ahead of last year's in most sections. Prospects for further gains, based on the production outlook, are good. This year's district hog crop, for instance, will be more than 50% larger than last year's, as against only 25% in the nation. The corn harvest is apt to be up, other feed crop conditions are favorable, and pastures are lush. Wheat output, meanwhile, has exceeded 1941's figure.

Conditions, of course, are not uniformly good. Wide areas in the west have little war work. Oklahoma oil activity has been hit, and wheat is off sharply in rural sections of western Missouri and eastern Kansas. Laggard towns include Grand Junction, Colo., Casper, Wyo., Lawrence, Kan., Okmulgee, Okla.

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Acme Steelstrap is furnished in all sizes specified by the authorities. And to reduce strap-applying costs you'll need Acme Steelstrappers . . . one-piece, magazine seal-fed strapping tools which do the job faster and easier. With this equipment, one shipper effected a saving of 35% in material and labor. Others report equally successful results.

Direct representatives, experienced in helping shippers fulfill Government requirements . . . are available. They can help you with your strapping problems, show you ways to speed up the application of strap. Write, 'phone or wire the nearest Acme office.

Also available from Acme are Silverstitchers (carton stitching equipment) and Silverstitch carton stitching wire.



ACME STEEL COMPANY

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with just a
"SHOT IN THE ARM"

Dinner table experts may disagree on whether we're in for a short sprint or a long pull. But to war plant management that is not the important question. Theirs is the responsibility for providing fighting tools . . . right now. Thus, when you are searching for new ways to build worker morale, be sure to include basic measures of employer-employee cooperation that will stay with you for the duration and after, helping your employees and your company do a better job for victory. Group life insurance is one . . . and, many say, the most vital . . . of these measures, because group insurance brings immediate benefits that have staying power. Write or wire us for full information.

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Postwar Items

Agfa Ansco celebrates its 100th anniversary with two new products that will be tied up by priorities until peace.

The war is tough, in spots, for the public relations people. Take the case of Roger William Riis and his client, the Agfa Ansco, which this week celebrated the 100th anniversary of the founding of Edward Anthony's photographic supply firm which now bears the name of Agfa Ansco, a division of General Aniline & Film Co.

• **Elaborate Plans**—Agfa was about due to release information on two important developments which Riis reckoned would be naturals to announce at the anniversary celebration, regardless of the fact that production of both products will not begin until after the war.

Plans included a dinner at the Waldorf-Astoria but went beyond that. Appropriate souvenirs of the occasion which were to be given to each of 300 guests included (1) an original daguerreotype, 1842 style, of an airplane, 1942 style; (2) a direct color print made by Agfa's new photographic color process, together with a color transparency from which the print was made; (3) a strip of Ozaphane sound film which will compete with disc phonograph records after the war.

• **First Obstacle**—First of the souvenir ideas to be stepped on was the matter of 300 original daguerreotypes. The amount of silver-plated copper required for them was absolutely unobtainable for souvenirs so customers received facsimiles—photoprints on paper of an original daguerreotype.

Next disappointment for Riis and Agfa was another encounter with priorities. Color transparencies were available and each guest received one, but the Army and Navy had requisitioned all of Agfa's materials that are used in making color prints by a new method which permits professionals and amateurs to do their own processing. After the war it will be Agfa's answer to Eastman's Kodachrome and Kodacolor.

• **Music on Cellophane**—Guests at the Agfa party did hear a demonstration of Ozaphane music, recorded on a thin strip of cellophane (from which as much as one hour of music may be played without interruption. Ozaphane film is produced by impregnating cellophane tape $\frac{1}{4}$ in. wide, with diazo components. The sound film is then produced by making contact points on Ozaphane tape from a master sound-recording film made by a new recording system. Since the sound track on the Ozaphane film is imbedded in the base, it is not subject to scratching.

58 Varieties

Heinz Co. adds plywood aircraft products to its food line as tin pinch makes itself felt. Soap powder is tested.

From baked beans to aircraft parts is quite a jump, but H. J. Heinz Co. of Pittsburgh is about to demonstrate that it can be done without seven-league boots. How much its vast food-packing enterprise has been curtailed by the war shortage of tin cans, the company refuses to say.

• **The Company's Changes**—But the curtailment may be measured with some degree of accuracy by four comparatively recent developments:

(1) Heinz is converting some of its plant facilities to the manufacture of aircraft products from plastic-bonded plywood, with the expectation of "large-scale production" in the immediate future.

(2) One of the company's machine shops is operating almost 100% on war subcontracts.

(3) The food-packing facilities are turning out Army rations of undisclosed nature and quantity.

(4) The company does not deny reports that it is watching results of a marketing test of a soap powder, Swirl, made by National Aniline & Chemical Co., subsidiary of Allied Chemical & Dye Corp.

• **New Line is Sales-Tested**—The soap product, a radical departure for Heinz which up to now has stuck exclusively to foodstuffs, has had some general sale on the West Coast and elsewhere. The marketing test is being conducted by the advertising firm of Maxon, Inc., in Syracuse and Utica, N. Y., and Grand Rapids, Mich.

Listening Drops

Cooperative Analysis of Broadcasting reports that radio isn't getting expected play as result of motoring decline.

Broadcasters who have been hoping that gas and tire rationing would keep people at home—with an ear glued to the radio—and who have introduced this hope into their sales arguments will find no support in the Cooperative Analysis of Broadcasting's index of radio listening. C.A.B.'s index of night-time listening stands at 23.4 for June of this year, a drop-off from 24.4 for June of last year. The daytime index is 13.6 against 14.8.

C.A.B.'s index, of course, reflects countrywide listening trends but any

"Yes, I said SYNERGISTIC!"



Synergistic is a mighty good word in Industry . . . and *synergistic* combinations of chemicals are helping to lick many a serious wartime problem. Shortage problems in particular!

Take the case of rotenone. An essential ingredient in insecticides, an invaluable aid to man in the perpetual battle of the bugs, rotenone has a direct effect on crop production and food supply. But rotenone comes—or *came*—chiefly from the Far East. Stocks are limited. Atlas chemists, however, found *synergistic* qualities in a mixture of rotenone and NNO (a new synthetic chemical with insecticidal power, born in the Atlas laboratories).

In combination, NNO increases the effectiveness of rotenone, and rotenone steps up the "kill" of NNO.

Result: NNOR (the combination of rotenone and NNO) helps growers check the onslaughts of thrips, aphids, red spider and other insect aggressors. NNOR not only extends and conserves rotenone—but provides an entirely new insect control, more effective than rotenone alone.

The Atlas staff, busy as it is in war work for the Government, is continuing to attack problems in other fields of endeavor—some of which, like insecticides, are far removed from the industrial explosives which gave Atlas Powder Company its name. Cooperation with customers—another form of *synergistic* action—helps mightily in getting the job done.

ATLAS POWDER COMPANY, WILMINGTON, DELAWARE

Offices in Principal Cities

NNO, NNOR—Reg. U. S. Pat. Off.



The **ATLAS** *Family*

Explosives · Chemicals
Coated Fabrics · Finishes
Activated Carbons

DARCO — ATLAS — ZAPON — KERATOL

marked upsurge in radio's popularity in gasless areas almost certainly would have weighted the totals heavily.

• **Sales Suffer**—Publishers' Information Bureau figures show that the radio networks increased their total revenues 7% this June over June of last year. There are 113 evening network shows on the air now; there were 108 this time last year. Last year, 21 night-time network shows went off the air in preparation for the "summer slump"; 11 replacements and one new show were added, for a net loss of nine shows. This year, 28 night-time programs have gone off and ten replacements and two new shows have gone on, for a net loss of 16.

Thus, if gas and rubber shortages are due to have a big effect on radio listening and time sales, there's nothing conclusive in the figures yet to prove it.

Impartial observers think that women's activities may constitute one reason why radio listening has not shown the expected upsurge. Women are the big radio fans, and recently they have been filling up their time with civilian defense, victory gardens, war production jobs, and whatnot.



LABOR & MANAGEMENT

NWLB Pegs Pay

Little Steel decision sets vital new policy; wage increases tied to cost-of-living advance, Jan., 1941-May, 1942.

The National War Labor Board's epochal decision in the case of the C.I.O. Steelworkers of America vs. "Little Steel"—Bethlehem, Republic, Inland, and Youngstown Sheet & Tube—definitely marks a new era in collective bargaining in the United States. By the terms of that decision (BW—Jul.18'42, p5) the amount of any wage increase which labor can expect from industry has been fixed almost as irrevocably as it might be by legislation; hence, that question has been in large measure removed from the sphere of labor disputes.

SUPER-PLOW

A hydraulically-controlled plow capable of cutting furrows as deep as six feet is the answer of two Santa Ana (Calif.) brothers, N. R. and C. R. Post, to the problem of reclaiming wornout beet and bean fields. When drawn by three 400-h.p. tractors, the super-plow covers four acres in eight hours, pulling fresh virginal soil to the surface. The bite of the huge blade (left) is controlled remotely by the rearmost tractor operator.

• **Cost-of-Living Peg**—The unions have been told that the board will grant pay increases sufficient only to bring wages into line with the cost of living as it was on Apr. 27, 1942, when President Roosevelt announced his seven-point program for inflation control (BW—May 2'42, p15)—and, incidentally, said that everybody's standard of living would have to be cut. And the steelworkers' acceptance of the Labor Board award was evidence of the fact that nowadays the unions don't argue with NWLB. Time was when the Labor Board, like its predecessor, the National Defense Mediation Board, gave unions what it thought they could get by striking. Now NWLB is calling the tune; the unions will take what the board gives them—at least on wages.

• **In the Saddle**—If it can stick to its policy the board now definitely runs America's collective arbitration—for industry no less than for labor. For if the C.I.O. was asked to swallow a tough dose of medicine—an increase of 44¢ a day instead of the dollar which it had resolutely demanded—the Little Steel employers were handed a pill which seemed even more bitter to them: a checkoff of union dues and a maintenance of membership contract, stipulating that, unless a union man relinquishes his membership in 15 days, he has to remain a union member during the life of the contract in order to keep his job in Little Steel plants.

Thus NWLB sought to establish even more firmly as a basic principle of collective bargaining in America the maintenance of membership rule which first won an important place in the picture when U.S. Steel accepted it at the board's insistence in a contract signed by its Federal Shipbuilding subsidiary at Kearny, N. J. (BW—May16'42, p36).

• **Elastic Yardstick**—The April 27 cost-of-living standard to which NWLB expects to peg wage increases is, of course, no inflexible yardstick, but its factors of elasticity are not likely to detract markedly from its effectiveness in operation. The board took note of probable exceptions in its five-point policy statement and then proceeded to give a practical demonstration of how the stretching operation would work in the Little Steel award.

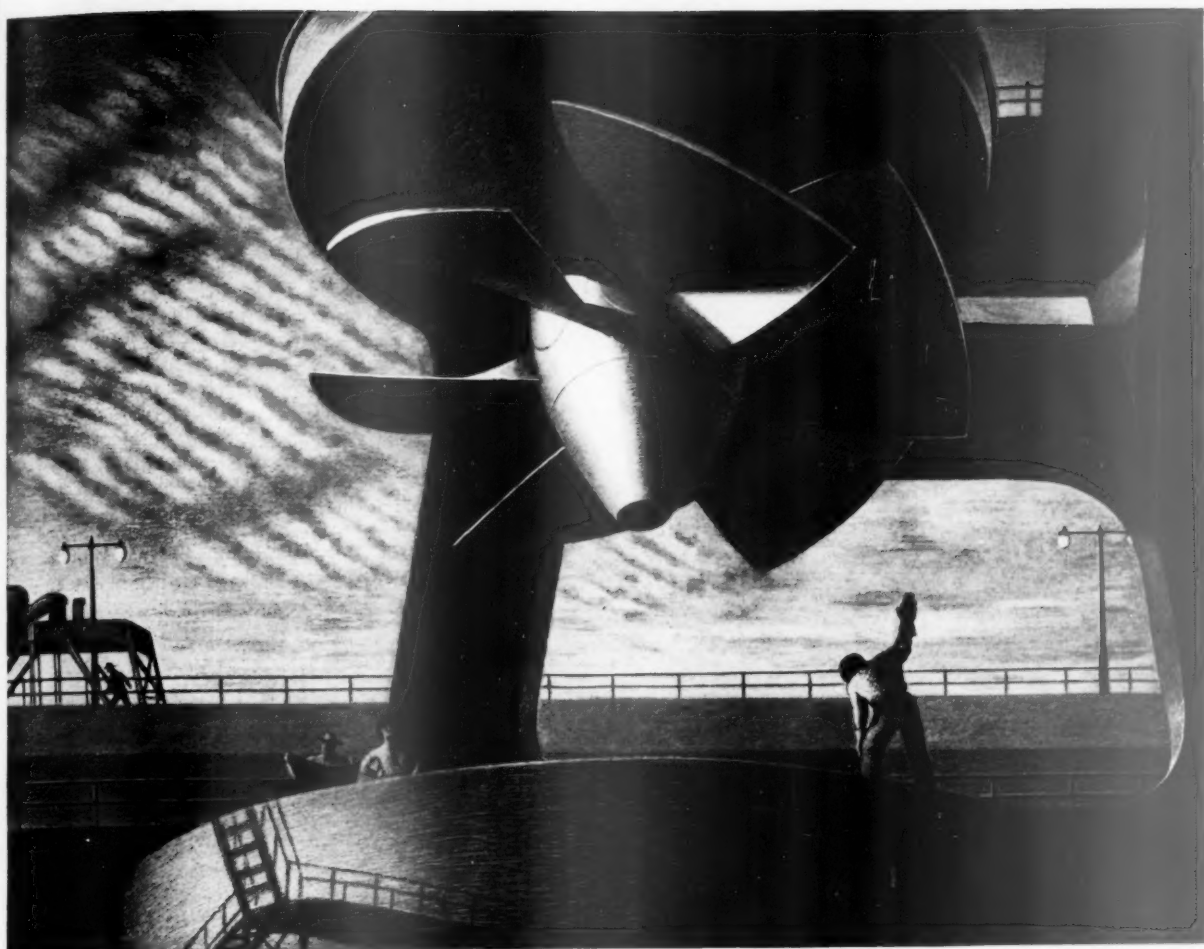
• **How Policy Worked**—In gearing wage increases to the increased cost of living as it was when the President delivered his anti-inflation address, the board noted that the cost of living began its upward climb in 1941, following "a long period of relative stability." From Jan. 1, 1941, through April, 1942, it advanced 15%; hence, argued the board, a 15% increase in wages during the

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...AND A *RIVER* WENT TO WAR

When the installation of this huge turbine runner was completed, the unlimited power of a mighty river was harnessed... inherent power which would have been wasted except for the ingenuity of man. Thus a river goes to war as a source of electrical energy for the production of ships, planes, tanks, and the raw materials from which they are made.

Since 1895 when the forerunner of this modern I. P. Morris turbine was installed, units totalling five million horsepower have been built by this division of Baldwin for America's great hydro-electric plants.

In the field of power production as well as in transportation, Baldwin is an important name. Diesel engines, water wheels, and water control equipment, in addition to turbines, are built by Baldwin divisions and have played an important part in the growth of America.

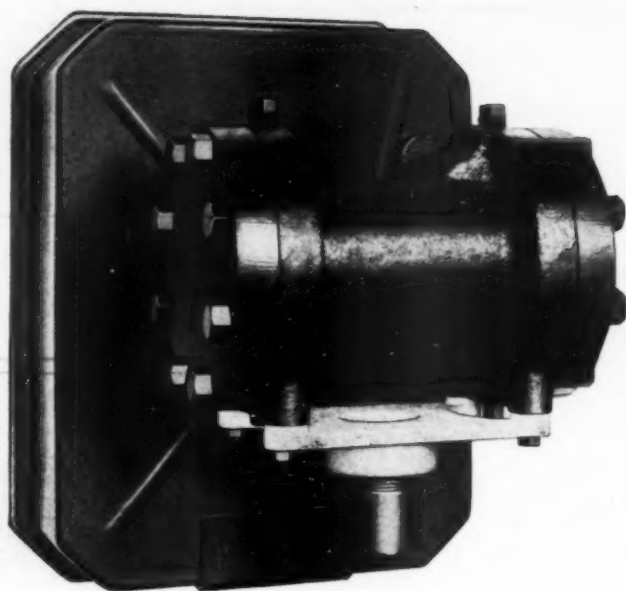
Baldwin is now one of America's great arsenals, serving the nation by producing vitally needed tanks, guns and other implements of war. Baldwin also continues to supply locomotives and the presses, testing equipment, castings, forgings and heavy machinery essential to other companies producing military supplies.



BALDWIN

The Baldwin Locomotive Works, Philadelphia, Pennsylvania:
Locomotive & Ordnance Division; Baldwin Southwark Division;
Cramp Brass & Iron Foundries Division; Standard Steel Works
Division; Baldwin De La Vergne Sales Corp.; The Whitcomb
Locomotive Co.; The Pelton Water Wheel Co.; The Midvale Co.

Baldwin serves the Nation which the Railroads helped to build



WILL THIS GADGET GET YOU TIRES SOONER ?

DON'T get your hopes up! We can't any of us count on new tires until after the war. But this new invention is already helping to win it!

It's the new Taylor mercury-less manometer for measuring flow and liquid level. It will save mercury—tons of it—for more urgent war needs. Each mercury manometer it replaces uses 7 to 11½ pounds of this highly critical metal at \$3.00 a pound! And its construction is so inherently simple that it requires practically no maintenance! *No stuffing box*—every engineer knows what a saving in upkeep that means. *No mercury* to contaminate the product. And *no pivots*—no friction, no wear!

In the synthetic rubber industry, it will save precious man-hours in maintenance, replacements, and repairs. If you do get tires sooner, Taylor accuracy will be a contributing factor!

In the manufacture of high-octane gasoline, it has an *extra* value, because it helps permit the efficient use of new, highly volatile, corrosive chemicals which would be difficult or impossible to handle with conventional instruments.

If you're in any industry where measurement of flow or liquid level is a problem, this new Taylor Aneroid (mercury-less) Manometer may be the solution. In fact, if you have *any* war production problem involving instruments, your Taylor Field Engineer can help you solve it! Taylor Instrument Companies, Rochester, N. Y. and Toronto, Canada.

Taylor

Indicating / Recording / Controlling

TEMPERATURE, PRESSURE, FLOW
and LEVEL INSTRUMENTS

KEEP ON BUYING U. S. WAR
SAVINGS BONDS AND STAMPS

same period was justified. Since the workers in Little Steel had received an 11.8% boost in the spring of 1941 (BW—Apr. 19'41, p40), touched off by Weirton Steel's 10-cent-an-hour increase, the board calculated that a further hike of only 3.2% would be required to bring the steelworkers' earnings into line with the advance in the cost of living. This worked out to 3.2¢ an hour by NWLB's mathematics.

But, observed the board, it is also under a Presidential injunction to give "due consideration to inequalities and the elimination of substandards of living" by the very terms of his anti-inflation statement. The cost of living is higher in steel towns than it is on an average in the rest of the country, said the board. Furthermore, the steelworkers had presented their wage demands two and a half months before the President demanded a freezing of the national economy; hence, they were caught by "a change in the rules in the middle of the game." Recognizing these "added equities" in the steelworkers' case, the board decided to grant C.I.O. an additional 2.3¢ an hour, bringing the total up to 5.5¢ an hour or 44¢ a day.

• **The Critics' Case**—Various government officials charged with combatting inflation—notably in the Office of Price Administration and the Treasury—are not too pleased by NWLB's new wage policy or its application. There are political as well as practical reasons for their displeasure. They know that Congress will be induced to enact effective controls over farm prices and to provide adequate subsidy money to bulwark price ceilings only if it is persuaded at the same time that it is putting a brake on wages.

With the President's new inflation-control legislation in its present formative state, it is politically in order for the critics in high Administration positions to disparage the probable effectiveness of NWLB's new policy, even though Congress is likely to do no better by law-making.

• **Will the Brake Hold?**—On the practical side, it's entirely possible that NWLB's policy won't be tough enough. In the first place there are those "added equities"—the special exceptions which the board has shown itself willing to make. Again, the impact of wage boosts which have been made since May 1—both those made voluntarily and those resulting from NWLB directives—and of other advances which are certain to follow, even though drastically pared down, must yet be reckoned with. Ultimately these will show up in the cost-of-living index, together with other costs which have managed to creep ahead, despite application of the price freeze.

And when they do show up, labor will be able to demand that wages be increased proportionately; NWLB will be under strong pressure to consider ad-

vances in the cost of living through September or November, not April.

• **C.I.O. Accepts with Regrets**—But if Washington authorities are disgruntled about NWLB's decision, it's nothing compared with the way labor feels about it. The four labor members fought to the bitter end for the full dollar increase and refused to sign the five-point policy statement which the board issued after the public representatives had finally won over the four employer members to their cost-of-living wage standard. (For their part, the employers were bitter-enders on the question of the maintenance of membership contract, plus the checkoff.)

On Wednesday, when the compromise was reached, Philip Murray had convened the steelworkers' policy committee, and advance news of the decision, scheduled for release the next afternoon, obviously provoked a long and heated wrangle which ended only when Murray left Pittsburgh.

After three hours of dispute, the policy committee voted to accept the award, and—barring a few not unlikely wildcat strikes by some union hotheads—the celebrated Little Steel case came to an end, at least as far as labor was concerned.

• **Big Steel on Spot**—The industry, of course, hasn't heard the end of it yet, for there are bound to be many repercussions. For one thing, on Monday of next week C.I.O. will initiate its campaign to force general inclusion of the wage boost, union security, and checkoff provisions in all its steel contracts. The big game which the policy committee will be gunning for when it starts its drive will, of course, be U.S. Steel, in all the plants of which the C.I.O. steelworkers have just won exclusive bargaining rights by rolling up landslide majorities in all elections conducted by the National Labor Relations Board (BW—Jun.27'42,p8).

A BLOW TO U.A.W.

Wage raises in two of the three major automotive cases before the National War Labor Board were indicated by the "sustained standard of living" decision by the board in the Little Steel case.

• **5¢-7¢ Instead of \$1**—Trade sources said that General Motors and Chrysler wages averaged approximately \$1 an hour in January, 1941. Subsequently, General Motors granted a blanket 10¢ raise, and Chrysler 8¢. If the board continues to seek readjustment of 15%, the variance in the cost of living between January, 1941, and today, an increase of about 5¢ an hour would be in order for General Motors and 7¢ for Chrysler. The C.I.O. United Automobile Workers Union is seeking \$1 a day.

The same dollar demand is manifested in the Ford case, but here the union's case is weaker. Ford wages were



No longer a flaming wreck...

An American fighter swoops down from the sky. Suddenly his engine catches fire. The pilot pulls a handle, and thereby blankets his engine with fire-eating carbon dioxide that quickly quenches the flame.

Handily stored under pressure in liquid form, carbon dioxide when released instantly expands to 450 times its former volume. By stealing the oxygen from surrounding air it smothers flame. Just as speedily this buoyant gas inflates a rubber boat or life vest.

Whether used for fighting fire or

for rapid inflation, CO₂ is tricky stuff to control...so diffusive that at regular storage pressure of 850 lbs. it is as difficult to seal as steam at 2500 lbs. Yet in emergency, control valves must function instantly and freely. There must be no sticking or seizing due to rust or distortion.

For these reasons, carbon dioxide valves are made of the famous INCO Nickel Alloy, Monel. Combining strength and toughness with freedom from rust and corrosion, Monel admirably fills this vital wartime role. Other INCO Nickel Alloys are similarly aiding in our all-out war effort.

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For the first half of 1942, *Business Week* stands 4th in total advertising pages and 1st in pages gained among the 116 magazines tabulated by Printers' ink.



regarded as slightly below those of its major competitors in early 1941. One report put the average then at 93¢ an hour. After the strike in April, Ford raised wages substantially, and even in labor circles today is considered as paying higher wages than either G.M. or Chrysler. Its pay raises in the intervening 18 months, therefore, are considered to average more than 15%.

• **Living Cost Cited**—From the headquarters of the U.A.W., meanwhile, came an observation that even though 15% was the basis in the Little Steel cases, the cost of living in Detroit had risen about 17%, and the latter figure should be regarded by the NWLB as the governing factor in the automotive cases.

First reaction to the 44¢ award to Little Steel employees was bitter in U.A.W. circles.

Nelson Bares Fist

A.F.L.'s uncalled strike in Pittsburgh building trades is ended, though war projects are still affected by pay tangle.

For those who believe the war administration has coddled labor unions too much, WPB chairman Donald M. Nelson's telegram last week to A.F.L. building tradesmen in Pittsburgh, who were staging an uncalled strike on a dozen vital war plant projects, was a refreshing surprise.

• **Message to Kelly**—Nelson's remarks were addressed to William J. Kelly, veteran member of the carpenters' general executive board, who has carried the burden for his own and three other unions in a complex wrangle over wage rates to be paid on heavy engineering construction as distinguished from building construction.

"By permitting or authorizing this strike, you are committing an unpatriotic act and you are holding up our war program," Nelson said. "The War Production Board demands immediate return of the men to work. If your answer to this telegram is not forthcoming within 24 hours, drastic steps will be taken."

• **Turned Over to Press**—What completed the surprise was that the telegram was released to the press, not by Nelson, but by Kelly, who said there was some concern in Washington over its publication. Kelly was unmoved by the attack on his patriotism, but yielded on advice of William L. (Big Bill) Hutcheson, general president of the carpenters, and all strikers returned to work pending further negotiations in Washington.

The dispute has provoked several stoppages and slowdowns since June 1 on such important war plant jobs as Carnegie-Illinois Steel's big additions in Homestead, Dravo's shipyard expansion on Neville Island in the Ohio River, ordnance expansion for Mesta Machine Co., and a synthetic rubber plant near Pittsburgh.

• **History of the Trouble**—Prenegotiated wage increases for carpenters, cement finishers, engineers, and laborers engaged in building construction took effect June 1. Wages on heavy engineering jobs, under an industry contract which runs to Jan. 1, were not changed, and the men were taking better jobs.

Kelly tried to bring the issue to a head with a strike threat late in May, but the best he could get was a hearing before the WPB Board of Review early this month. That agency took no stand on the wage controversy, merely found the unions guilty of violating the stabilization agreement of 1941. The unions answered with last week's strike.

WHEN YOU CHANGE FROM TIN TO PAPER TO PACKAGING



WITH tin, steel and other strategic packaging materials busy battling Schicklgruber and partners, hundreds of manufacturers are making successful changes to paper packages. Fortunately, there is an abundance of paperboard to replace critical materials!

If your package must be changed, naturally, you'll want to make the shift with a minimum of friction and lost time! Sutherland is already producing many alternate packages that will be in use long after the emergency has passed.

At Sutherland paperboard can be paraffined, laminated or combined with other materials for adequate product protection. It can be printed for eye appeal and quick identification. And it can be fabricated into many sizes and shapes... rectangular, conical, cylindrical, and pail-shaped. Sutherland has both the equipment for performing all these operations plus the know-how to choose the right ones for your job.

Whether your problem is new packaging for food, tobacco, small metal parts, clothing, or other products... Sutherland's complete facilities for development, design and manufacture are at your service! Wire or call! America is in a hurry!

This year, Sutherland celebrates its 25th anniversary. Started in 1917 (the year America entered World War I) with 10 workers, the company now gives employment to 2100.

SUTHERLAND PAPER CO.

KALAMAZOO, MICHIGAN

All-Out Operation

How continuous production can be made to work in a machine tool plant is demonstrated by Monarch's 3-shift program.

Whether continuous operation is practicable for machine tool builders has long been in dispute. Many builders have insisted that their operations are so intricate that it is impossible to make all divisions of production come out even, that some slack time (say Saturday noon till Monday morning) is needed to loosen up bottleneck departments.

• **Mr. Whipp's Thesis**—On Pearl Harbor day, Wendell E. Whipp, president of the Monarch Machine Tool Co. of Sidney, Ohio, decided that completely balanced, 24-hour production, seven days a week, was one of the "impossible" things that had to be done. This, by the terms of the Whipp thesis, meant all, not nearly all, of the plant's facilities.

Monarch, an early winner of the Navy "E," could have found grounds for complacency, had management been in that frame of mind at the beginning of 1942. The company had doubled its production last year. Instead of pointing with pride, however, President Whipp headed straight for a policy of "time out for meals only."

• **40% Additional Gain**—As a result, Monarch is now able to cite a 40% additional gain in production since March. A third shift had to be added. The average work week was reduced from 59 to 52½ hours, while total employment was increased 26%. The number of models manufactured was cut 50%. Per-man production was stepped up by a program aimed at convincing each man that he was doing an urgent war job. At the same time, hourly wage rates were boosted 17½%, a move which the company feels has borne fruit productionwise.

While there was no set rule for extra compensation on the night shifts, every man assigned from the first to the second or third shift got a raise. Possible objections by the workers to the reduction in hours per week were met in advance. The company announced it would pay the same number of dollars for 52½ hours that had been paid for 59 hours.

• **Shifts Are Stabilized**—A man doesn't swing back and forth from one shift to another. A regular time for work makes for regular living habits, company executives believe, and less time out. Each eight-hour trick includes half an hour for lunch. The company gets the best food it can buy and serves it in a plant cafeteria, at cost prices.

Each shift gets one day off every



THE Lever
THAT MOVED
THE WORLD

"Give me a lever long enough and a fulcrum," said Archimedes, "and I can move the world." But long before Archimedes a lever in human hands had moved the world profoundly.

The prehistoric experimenter who first used a crude lever to do what his own strength, directly applied, could not accomplish, changed the whole future of the human family. For the lever was probably man's first machine—his initial step in moving loads exceeding the limitations of his own muscles.

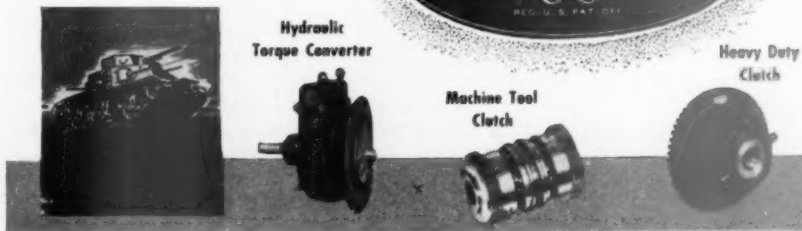
Today man has motors and engines to supply power for him, but all of them depend upon speed for effective results. To pick up a load from a standing start, after the driving unit is in motion, demands a connecting link which will apply the load gradually.

The development, improvement and economical manufacture of devices for

this purpose is the specialized business of the Twin Disc Clutch Company. For 24 years this company has worked intimately with manufacturers, large and small, whose products range from machine tools to oil rigs, from power shovels to locomotives, from motor boats to farm tractors. Wherever power must be applied to a load, there is a Twin Disc product built to do that particular job most effectively.

If you build, or plan to build, equipment incorporating driving and driven units of 1 to 800 HP, it will probably pay you to get in touch with us. Present deliveries are confined to essential war needs, but our engineers will be glad to work with yours . . . in strictest confidence . . . to plan now for the better days which are to come. **TWIN DISC CLUTCH COMPANY,** 1402 Racine St., Racine, Wisconsin.

The Twin Disc hydraulic torque converter provides the "leverage" necessary to start and maneuver a huge military tank. Without gear shifting, an infinite range of speed ratios is automatically applied.



three weeks, always on Monday, when the two remaining shifts work an extra four hours each. That is, once every three weeks a worker has Monday off; but on two Mondays out of three, he works a 12-hour day, less two half-hour lunch periods.

● **Nine Models Instead of 18**—Instead of 18 different lathes, Monarch now builds nine. In reply to salesmen's objections, Fred Dull, vice president in charge of sales, pointed out that war demands dictated more lathes and fewer models; a customer would rather get a different model in a hurry than wait and wait for a specified model. Reduction of model numbers permitted scheduling production in larger quantities, some models being permitted in lots of over 1,000.

"Doc" Abe, vice president in charge of production, made a preliminary announcement of the new plan at a Sunday morning breakfast meeting attended by superintendents, department heads, foremen, and assistant foremen. He told them "how the boys out there in the Pacific were crying for weapons. . . ."

A few workers quit, but nearly all came back after they thought it over.

● **Getting Organized**—A new second shift was begun with a nucleus of men taken from the old day and night crews. The old night shift became the third shift. As fast as possible more men were taken from the first and third, and added to the second. New men were trained into simplified first and third shift jobs, to replace the men transferred. Later, new men could be absorbed by all three shifts. By June 1, the shift ratios were 10-8.6-8.3. That is, for every 100 men on the first shift, 86 worked on the second, and 83 on the third.

The balance in favor of the first shift is explained by the fact that more engineers, executives, production control men and assembly line workers are on during the day. Machine operations are scheduled 100% on all shifts alike. If a machine is idle, it's because the operator is ill or the machine is being repaired.

● **Repair and Maintenance**—There is a repair and maintenance crew for each shift. Before three-shift operation began, equipment was obtained to balance production against all possible bottlenecks. The company steered clear of machine types in heavy demand, tooled up its own lathes instead. There is, in Whipp's words, "careful and continuous housekeeping." Assembly, receiving, shipping, engineering, and other functions of the business carry clear around the clock.

Suppliers were told to deliver any hour, day or night. This helps dramatize the rhythm of war production for Monarch workers. And the men see the lathes going out the door the moment they are finished.



BON VOYAGE

Speeded on its way with the blessing of Oil Coordinator Harold L. Ickes, the first pipe for the new 550-mile Texas-Illinois petroleum line (BW—Jun.20'42,p14) left a Lake Erie plant

last week. Ickes, coatless, is in the center of a group that included W. Alton Jones, president of War Emergency Pipelines, Inc., Benjamin Fairless, president, U. S. Steel (second and third from left) and B. F. Harris, president of National Tube (fourth from right).

A New Union?

Meeting in Chicago, called by Mechanics Educational Society of America, viewed as effort to unite independents.

Watch the meeting of the unaffiliated independent unions in Chicago over this weekend. Summoned by the Mechanics Educational Society of America, it foreshadows a possible new entry in the field of central labor organizations.

● **M.E.S.A. Background**—Although it is hardly known in the national labor field, M.E.S.A. is no fledgling. It was organized ten years ago strictly along craft lines, embracing tool and die workers, for the most part. Today it claims 42,000 members and is recognized by the National Labor Relations Board as bargaining representative in 21 Detroit plants, 15 in Toledo, ten in Cleveland and one in Elyria. Best known names on its plant list are the Detroit factory of Nash-Kelvinator Corp., Electric Auto-lite Co., and Eureka Vacuum Cleaner Co.

Its secretary, Matthew Smith, is recognized in Detroit labor circles as a most aggressive leader, although publicly he is often castigated by officials of his prime rival, the C.I.O. United Automobile Workers Union.

● **Probable Absentees**—The M.E.S.A. convention call went out to 67 other unions. It is regarded as certain, how-

ever, that not all of them will be represented for the invitation list includes many independents of national stature such as the Typographical Union and the railroad unions, both of which have always pursued their independent ways with a good measure of success.

The field did include such likely prospects for convention attendance as organizations of welders which have steered clear of either C.I.O. or A.F.L. affiliation, a number of unions whose membership is largely confined to one company, and others. Unions summoned are in such industries as metal working, communications, utilities, oil, marine, aircraft, and soft drinks.

● **Opposed to Checkoff**—In the light of its move for leadership in organizing a new central body, study of M.E.S.A. leaders' thinking may be significant. They are opposed to dues checkoff on the grounds that a checkoff and a closed shop are primarily devices for guaranteeing a fat treasury. Dues are standardized at \$1 a month. The initiation fee is \$2, and members of other unions are admitted without initiation fee. Locals keep 60¢ of every dues dollar, the balance going to the national organization.

M.E.S.A. officials say they have no intention of trying to start up another central labor group as the C.I.O. or A.F.L. (they call them "holding companies"). Instead, they claim they will seek at Chicago only to organize a loose federation of unions to obtain mutual benefits in continued independence and resistance against domination by other unions and by government.

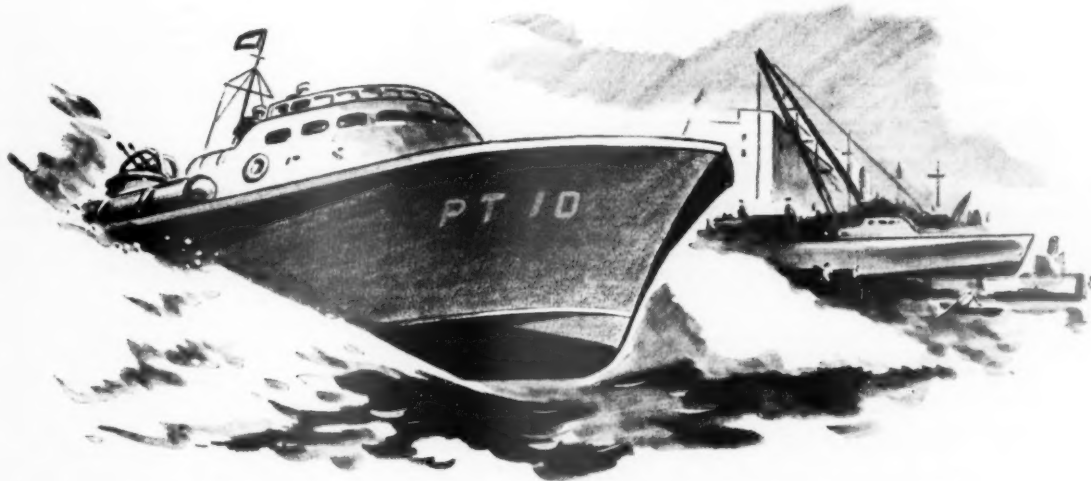
On Guard to Keep 'Em Running

From swift-striking "mosquito boats" wreaking sudden destruction, to plodding sweepers, cautiously clearing the sea of mines, there is a wide variety of craft powered by internal combustion engines.

And not on ships only, but in the yards where ships are built, in factories, oil fields, and with armies on the march, these same types of engines are delivering power when and where it is needed.

To guard against breakdowns of this vital source of power, to "keep 'em running," and prevent damage to the engines, Penn has developed an automatic "sentry" that stands a constant watch. In case the oil level drops dangerously low from any cause, or the cooling water system fails, this safety control sounds a warning alarm...or, if desired, will automatically shut the engine down. Thus a simple fault can be corrected before serious damage occurs.

Equally adapted for gas, gasoline or Diesel engines, these Penn controls provide low-priced insurance against power interruptions



and engine damage. In addition, they relieve man-power shortage by lessening the need for constant personal attendance.

If you use internal combustion engines for any purpose you should know about these new safety controls. We'll gladly supply full information without obligation. Write now—ask for catalog E-100.
Penn Electric Switch Co., Goshen, Indiana.



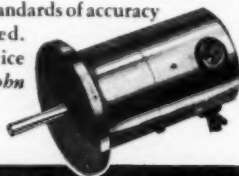
REFRIGERATION, AIR CONDITIONING, ENGINE,

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In the field of VERY small motors — .0024 to .25 HP — here is a new source that can really "come through" with dependable power units for your instruments and other mechanisms in airplanes, tanks, ships. Dimensions (complete with housing) 1½" dia. x 2½" long, to 3½" dia. x 5" long. 15 years experience (entire output previously absorbed as original equipment on own appliances approved by Underwriters' Laboratories, etc.) High standards of accuracy long established. Engineering service available . . . *John Oster Mfg. Co., Racine, Wis.*



JOHN OSTER MFG. CO., Racine, Wis.



THOUSANDS of BOMBERS over there mean MILLIONS of PARTS over here

Shown above is an installation of Lewis Skid Boxes in a large warplane plant — used to efficiently handle some of the thousands of parts that go into the assembly of our huge war planes. One large box forms the base — two medium sized boxes are on top of the large box — and on these two are placed smaller boxes — making a stack of 7 boxes to one unit. The whole unit or either of the upper segments of three boxes may be moved by means of a power lift truck. Your war job may not be airplane manufacturing, but if you handle small parts, stampings, castings, etc., you can do the job more efficiently and at a lower cost with Lewis Boxes or Trays. They offer light weight, uniform size, stackability, and adaptability to your manufacturing method. Write today for information outlining your handling problem.

G. B. LEWIS CO., Dept. W7, Watertown, Wis.

LEWIS
INDUSTRIAL CONTAINERS

Pickers as Usual

Michigan tart cherry crop is harvested without a crisis in spite of all the fears of labor shortage which didn't develop.

The way to beat a farm labor shortage is to worry like everything in advance and then discover that the shortage doesn't exist. Alarming forebodings of earlier in the year have produced singularly few acute farm labor bottlenecks. There is ample time for a good many to develop later, but on the other hand spring and early summer crops in most regions have come and been taken off without headline reports of quantities of food decomposing for want of gatherers.

• **Ahead of Orchards**—One crop that was definitely slated for harvesting trouble is being written off this week as an almost normal operation. In northern Michigan during the week 10,000 cherry pickers were ahead of the lush orchards and pushing the canneries to the limit as the crop reached and passed its maturity crest.

Cherries and vacationists are the economic backbone of northern Michigan. Into four counties around Traverse City is crowded more than half of Michigan's sour pie-cherry production of 73,000,000 lb., and hence more than one-quarter of the entire country's production. This concentration requires about eleven imported pickers at harvest time for every locally available worker and is therefore an ideal site for potential disaster in the event of a shortage of migratory fruit hands.

• **Contrary to Expectations**—This year no shortage developed, despite grim predictions and the wholly reasonable expectation that mobile workers would be bogged down on thin tires, overage carburetors, and war factory jobs.

The Grand Traverse Bay area, nevertheless, contributed its best grade of worrying to the problem for a solid four months, and laid out an elaborate program to meet the problem that never developed. As early as last February Traverse City's Chamber of Commerce agriculture committee sat down with U. S. Employment Service and Department of Agriculture personnel and hatched recruiting plans.

• **Letter Campaign**—In April 2,000 letters were dispatched to civic clubs, school superintendents, and Boy Scout councils. They recommended that groups be assembled for a combined cherry picking and open air camping vacation during cherry season along the hundred odd miles of sandy shoreline in the Grand Traverse area.

In May, with the crop looking better every day, local residents took the ex-



CIVILIAN CITATION

Among the first civilian citations for distinguished work in war production (BW—Jun.20'42,p18) on the West Coast was awarded to David Shade, shop superintendent of the Apex Tool & Machine Co. who was cited for a superior type of plastic mold he made for airplane parts.

tremely painful step of canceling the biggest community party on the calendar, the annual cherry festival, because festivities might interfere with the anticipated tough workout in mid-July.

• **More Appeals**—In June the Office of Civilian Defense lined up possible white collar volunteers, the Soil Conservation Service made a detailed survey, and the Chamber of Commerce sent coaxing wires as far away as southern Texas and received unanimous regrets from distant civic bodies who were looking for farm labor themselves.

Also in June, every merchant in Traverse City pledged himself to shut up shop during the impending crisis and grab handfuls of cherries (now called red tart cherries, particularly since sugar rationing put the word "sour" in the doghouse) from overloaded trees. And the USES started whipping up the federal employment lanes in a dozen states.

• **And Then—No Crisis**—Finally, in early July, Gov. Van Wagoner of Michigan added his appeal. On July 6 the picking season opened, the customary ladder shortage developed, a modest fraction of the pickers turned out to be drug clerks from Detroit, bona fide

vacationists from St. Louis and Chicago ready to finance their outing with ladder work, Boy Scouts in troops, high school girls and a few housewives in chaperoned groups, and other untanned pickers.

But what really removed the fuse from the bomb that Grand Traverse was watching in fascinated horror was the surprisingly normal visitation of the fruit hands that had always appeared.

• **Beet Hands Help**—Mexican sugar beet hands, having weeded the beet fields in central Michigan, moved into the Traverse area as usual for a spell of cherry picking while the beets were readying for later harvest work (beet growers were angrily claiming last week that they had been coaxed away before they finished weeding).

Professional fruit hands, having worked over the moderate early cherry and fruit crops in southern Michigan (Berrien and surrounding counties), showed up in normal abundance, with jalopies no worse than usual and state auto tags representing a third of the country, also as usual.

• **Done Professionally**—Relieved growers of Grand Traverse, Benzie, Leelanau, and Kalkaska counties conceded that the appearance of near-normal numbers of experienced hands was saving the situation as no Boy Scouts ever could. The USES conceded that the fruit tramps had found transportation somehow and, moreover, that war factory jobs hadn't induced the professional picker to cage himself under a factory roof, and probably wouldn't. (It is impossible to get the confirmed orchard hand into a cannery at double orchard earnings.)

Civic bodies gladly conceded that perhaps everyone had been over-doleful about the migratory worker.

• **\$2,500,000 Prop**—Proportions of the disaster which failed to materialize in the four-county Traverse area are huge in relation to the size and population of the region. Although tourist business is good this year, the cherry crop is worth \$2,500,000, and this year's market is more or less assured. The Department of Agriculture, for lend-lease and the military, has asked that a quantity of canned cherries equal to 44% of the 1940 crop be held available for sale to the Agricultural Marketing Administration.

Although no price was set as a buying figure, the AMA has announced that it will buy all the cherry canners have left next Mar. 1 at \$1.50 a dozen #2 cans and \$7.50 a dozen #10 cans, if canners are able to prove that they paid growers at least 5¢ a pound.

• **Picker Money**—First money that local merchants get, however, is picker money. Prices this year were 30¢ to 35¢ for each 25-lb. lug and harvest hands can pick 10 to 15 lugs in an eight-hour day. There are 2,000,000 lugs to be picked within reach of



MINUTES gained between production and delivery to the fields of battle will speed "V" day!

Between these two points, Protek-Sorb Silica Gel is preventing loss of precious time and vital materials due to corrosion, rust, mildew and other damage caused by moisture. Because Protek-Sorb eliminates the cause of moisture damage, time-wasting methods of preventing moisture damage are out—for the duration and thereafter. In War and Peace, Protek-Sorb aids Production, serves Conservation and speeds Delivery.

THE DAVISON CHEMICAL CORP., Industrial Sales Department, BALTIMORE, MARYLAND

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LOW-COST GROUP HOSPITALIZATION and LIFE INSURANCE PLAN A Good-Will and Efficiency Builder for Any Size Company

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- ★ Surgical Expense
- ★ Hospital Fees (Laboratory, etc.)
- ★ Maternity Confinement Expense
- ★ Compensation for Time Lost from Work
- ★ Loss of Life Through Accident
- ★ Loss of Life Through Natural Cause
- ★ Physical Dismemberment

**A SECURE WORKER
IS A HAPPY WORKER**



FACTORY, OFFICE, STORE GROUPS

Unique North American Plan affords dependable financial help for Company Employees and their families in case of unexpected illness or accident. No group too small or too large to participate. Plan offers exceptional coverage for factory, office, shop and store groups. No age limit. No medical examination. Life Insurance optional. Inclusion of family optional. Premiums—only a few pennies a day paid by Employee.

Mail coupon for details on introducing plan in your Company. No obligation.

NORTH AMERICAN MUTUAL INSURANCE CO.
Dept. 7-B, North American Bldg., Wilmington, Del.
Please send complete details on Employee Group Insurance Plan.

Name Title
No. of
Company Employees
Address
City State
(Attach coupon to business letterhead)

Traverse City (in a circle somewhat larger than the four-county area) for a total wage payment of about \$600,000.

A bonus of 5¢ a lug is collectible by any hand who remains through the season (about five weeks), but labor turnover is normally 100%.

● **Merchants Benefit**—At 30¢ a lug the picker wage is 20% over last year's rate (the Department of Agriculture says general farm labor wages are 22% over last year). Any way it can be figured, the picker income will be large this year, and the professional fruit hand drops at least 85% of his income into the hands of the nearest (a) clothing merchant, (b) juke joint, and (c) miscellaneous storekeeper.

At that rate the area retains more than \$500,000 of the picker money.

● **No Housing Difficulty**—Housing costs for migratory workers are at an extreme minimum. A few big growers provide housing, but elsewhere the picker crews just camp. An offer of a large migratory camp from the Farm Security Administration was turned down by combined growers, partly because there are fewer headaches and less loss of time among pickers camping in small groups, and partly because transportation to and from orchards would be increasingly difficult.

Traverse City's radio station WTCM has been standing by this season ready to interrupt programs with free time for emergency calls for pickers and cannery workers (canneries jump employees tenfold during picking season). It has had far fewer demands than anyone in the area would have wagered three months ago.

Harvester's Own

Tank maintenance battalion of 859 men—most of whom are skilled mechanics—recruited entirely from company's rolls.

A new army recruitment technique was inaugurated early this month when the International Harvester Co., at the request of the War Department, organized a complete tank maintenance battalion, entirely from among its own employees (see cover).

● **This Is Different**—Many large corporations engaged in war production have trained army personnel in their plants (BW—Mar.28'42,p64), but this is the first reported instance of the enlistment of so large a group, consisting mainly of highly skilled technicians, from a single company.

More than 25% of the personnel of a mechanized division works exclusively on maintenance of the equipment, and the Army's idea is that no men are quite so well qualified to do this work as those



TRAILER LAB

Speedy first aid for ailing aircraft is provided at Lockheed by Triplett & Barton Laboratories. This involves a completely equipped x-ray trailer-laboratory by means of which hidden structural weaknesses may be diagnosed within 15 minutes after a plane has landed. Exposures are made on the spot as is developing (upper right) and finally the inspection of radiographs (right). If the patient is O.K. it goes back into service at once, otherwise it is grounded for repairs.



who in civilian life were employed in building or servicing similar machines.

● **859 Men Chosen**—More than 1,000 Harvester employees applied for service with the battalion within one week after enrollment began, and of these 859 were chosen, and were inducted July 15. No inducements of any kind were offered applicants beyond their own desire to enter the service for this particular kind of work. The company does not intend to supplement the army pay scale.

Aside from the lieutenant colonel in command, all officers—both commissioned and noncommissioned—will be selected from the group, after completion of the basic training which the men are now receiving at Camp Perry, Ohio.

● **75% Skilled Labor**—The company made no reservations as to which employees might apply, taking the position that anyone patriotic enough to volunteer, regardless of his degree of skill, should be allowed to go, the problem of replacement notwithstanding. As a consequence almost 75% of the more than 1,000 applicants were mechanically skilled, with only 25% coming from white collar employees, such as salesmen and clerks. Over one third of all applicants came from the company's dealer organization, which had been hard hit by conversion of manufacturing facilities to war production.

It is expected that similar units will be formed by other large corporations. A signal corps battalion is now being recruited among the employees of the Bell Telephone System, and War Department requests have already gone out to several other firms.

LANDMARK FOR M. of M.

General Electric amended its contract with the C.I.O. this week to include a maintenance of union membership clause, and in so doing became the nation's first large employer to agree to such an arrangement of its own volition. Up to this point, the spread of agreements which provide that union members must remain members during the life of the contract or be fired was the direct result of National War Labor Board directives. G.E. action, the outcome of union-management negotiations in which the government was not officially represented, signals an entirely new attitude toward M. of M.

In bargaining with the union for M. of M. instead of letting a dispute over union security go before a government tribunal, G.E. got a milder form of maintenance than it is NWLB's habit to award. Under the new clause G.E. unionists can drop out of the C.I.O. on 60 days' notice without forfeiting their jobs.

FINANCE

Piped-Steam Gain

As a result of fuel crisis, eastern utilities that supply central district heating are expecting profitable winter.

As a by-product of the threatened fuel shortage, East Coast utilities are doing a record business in new contracts for steam service. For the first time in years, they don't have to worry about cost comparisons between piped-in steam and on-the-premises oil heating. Salesmen for central district heating find worried landlords eager to talk business.

• **Good News at Last**—This is good news for electric power companies, which handle steam service in most of the cities with central district production. It also makes pleasant reading for stockholders in several independent firms and for minority interests in companies controlled by the utilities.

New contracts will make a big difference in the income account of steam distributors. The last ten years have been an evil time for central district steam production. In most companies, the steam department has chalked up a steadily growing list of deficits. Even a small jump in revenue will look impressive by comparison.

• **Rising Demand**—So far, the biggest flurry of new business has come in New York City, where New York Steam Corp., subsidiary of Consolidated Edison, has already written contracts for a 14% increase in dollar volume. In the last few weeks, Boston and Philadelphia have joyfully noted a similar pick-up. Even Atlanta, relatively close to the southwestern oil fields, reports a rising demand.

In the first six months of this year, New York Steam wrote contracts for \$1,400,000 worth of new service. All except \$80,000 of this represented conversion of buildings from oil heating. Most of it came in large blocks from apartments, hotels, and office buildings.

• **Fingers Crossed**—New York Steam hopes the new contracts will put it well into the black this year, but it's keeping its fingers crossed. Cost factors are unpredictable. Material shortages may slow up installation, making it impossible to accept all the new applications.

A lot depends on the weather. About 65% of the company's sales are for space heating purposes, and steam executives pray harder for cold weather than any boy with new skates. Last year, mild weather cut sales to 10,102,000,000 pounds;

gross revenues dropped to \$9,837,000, and the company rang up a net deficit of \$571,000. In 1940, average temperature in the eight heating months was 1.2 degrees below normal; sales totalled 11,283,000,000 pounds. Gross revenue stood at \$10,851,000, and net profit was \$204,000.

• **Harder to Make Profit**—Since 1930, all steam distributors have found it harder and harder to make a profit. Main reasons were the decline in new building and competition from low cost fuel oil. New York Steam earned \$3.83 on its common stock in 1931. In every year since 1937, it has shown a deficit for the common, and except in 1939 and 1940 it has failed to earn dividends on its cumulative preferred.

New York Steam is the largest company of its kind, and from an earnings standpoint one of the best situated. The hard times that whittled away its income cut even deeper into the business of small distributors in other cities.

• **A Record Winter?**—This year the eastern steam companies hope they will be able to tell a different revenue story. Some think next winter will set a record for dollar volume.

Biggest trouble just now is getting material to make new installations. Government authorities, also worried about fuel supply, have been quick to grant permission for new connections, but essential valves and fittings are hard to get. Work is going slowly, and before long some companies may have to turn down applications.

• **Cost Problem**—The cost problem is another headache. Almost all companies work on a sliding price scale which covers them against changes in fuel cost, but if other expenses go up they are unprotected. In some cases taking on new customers will mean either plant

enlargement or sharply increased operating costs.

New York Steam and a few other companies have a "leased plant" policy which makes the problem somewhat simpler for them. Whenever they convert a building to steam, they leave its original heating facilities intact and arrange with the owner to use them at times of peak load. In this way they can expand their service without having to make their central plants big enough to carry the largest possible load.

• **Looking Ahead**—In spite of the question marks, most eastern steam producers expect a good net income showing next year. They are also hopeful about the long run. Most of the new customers, they believe, will stick with steam service even when the fuel shortage ends.

Inland companies watch the East Coast enviously, but feel no change themselves. Indianapolis, with the second largest steam system in the country, sees no threat of a fuel shortage. The same is true of Detroit.

Raising V Funds

U.S.-guaranteed loans aid a growing number of contractors. Air Force, pushing this credit, reveals some case studies.

Money is filtering out to at least a few small businesses to finance war production, despite many reports to the contrary. Although war contractors have been somewhat slow to take advantage of the Regulation V loans, an increasing number of them, especially the small manufacturers, are now using this system to obtain credit.

• **Eligibility Standards**—Regulation V loans are made by commercial banks against a government guarantee which can run as high as 90% (BW—Apr.

Happy Ending for McKesson

The federal courts this week wrote the last line to a happy ending of one of the present decade's most spectacular financial cases when Judge Alfred C. Cox signed the final decree in reorganization proceedings of McKesson & Robbins, Inc., whose antecedents reach back 100 years.

The present action was, of course, only a formality. McK. & R. was returned very definitely to the ranks of the financially healthy fairly well over a year ago (BW—Apr. 5'41, p24) when the same jurist formally approved the company's plan of reorganization.

New common stock of the reorganized company made its bow on the New York Stock Exchange July 15, 1941, prices ranging from \$13 to \$13.75 a share. In the turbulent markets of succeeding months, it sank to \$9.25, currently has recovered to \$11.50.

As an aftermath of the looting of company assets by means of fictitious inventory entries (engineered by respected President Coster, revealed in 1938 as ex-convict Philip Musica), the company recently received refunds totaling about \$420,000 on federal taxes for 1931 and 1935.

How many "mental sit-downers" have you in your organization?

"In every factory and store, among office workers and salesmen, costly 'sit-downs' have been going on for a hundred years—*mental sit-downs*", says Craig Davidson. "Commands to do thus and so have met with mental sit-downs which have been just as effective in blocking production and sales as any physical sit-down that ever stopped an assembly line."

"That is one reason why this book," he goes on, "should be useful to any man whose job is to get other men to do their work right. It should visualize for him *what causes mental sit-downs* and *what to do about them*."

Getting Things Done in Business

By EVERETT B. WILSON

Director of Porto Rican Trade Council,
Formerly Assistant Director of Personnel,
Kroger Grocery and Baking Company

Second Edition, \$2.50



A practical set of suggestions to executives giving detailed directions for getting employees to do their jobs as management thinks they should be done.

"An executive's success depends squarely on two points: whether he has good ideas and whether he can get his ideas actually and properly used." This book deals with methods of getting your ideas used efficiently. It tells how to get policies, plans and instructions carried out as they were designed to be carried out. It is in effect a working manual on leadership. It tells how to secure effective and intelligent cooperation.

Have you seen the Revised, Up-to-Date Third Edition Hutchinson's STANDARD HANDBOOK FOR SECRETARIES

616 pages, 6 x 9

New low price, \$2.95

CAN you depend on your secretary to handle any assignment judiciously, quickly, correctly? Can you depend on her English?—her smooth and efficient handling of people? Here is a new book that spells better results in all work of the secretary. Placed in your secretary's hands it will be invaluable in assuring the correctness of correspondence, in eliminating error, in promoting good relations, in providing a wealth and variety of information that will enable her to handle many details of work with more satisfaction to you.

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Address

Position

City and State

Company

BW-7-25-42

18'42,p77). Applicants do not have to meet the strict credit requirements which banks demand for peacetime loans. Instead the contractor's eligibility is determined by two factors: ability to turn out the goods for which he has contracted, and necessity for the goods he is producing.

The Army Air Force has been energetic in helping contractors to obtain guaranteed credit.

• **How Loans Are Used**—Examples from the Air Force files illustrate the way these loans are being used:

(1) A small company making tubular products for 18 years had stretched its financial resources to the limit in expanding its war production. In 1939 this concern did a gross business of \$43,000, in 1940—\$40,000, in 1941—\$165,000, in the first five months of 1942—\$242,000. Without help this supplier probably could not produce this year more than \$500,000 worth of goods for the government. With the \$150,000 loan granted, the firm will do \$1,000,000 worth of business in 1942, may reach \$1,500,000.

(2) A family concern pioneered aircraft engineering developments for many years—in particular an instrument-checking device which enables ground crews periodically to recalibrate a plane's instruments on the ground to avoid mishaps in flight. Records of the business show: 1939—\$140,000; 1940—\$235,000; 1941—\$460,000; 1942—\$1,500,000 estimated on the principal contract. With normal credit resources, this firm could not produce over \$750,000 worth of Air Corps matériel this year, but with a loan for \$300,000, the contractor will achieve a 100% increase in output. And, because the firm is especially capable from an engineering standpoint, an advance has been made for development and manufacture of a second item, which will be worth \$500,000 in business done this year.

(3) Two mechanics with little money organized a precision-parts business in 1940. The first year's gross amounted to only \$7,500. In 1941, the two partners did \$20,000, but their lack of capital limited their sights to \$50,000 this year. A \$20,000 loan, however, will permit a 500% increase in output—to \$250,000. This concern is making a vital part of landing gears for the Air Corps, and is already out-producing thirteen other suppliers on a precision gun part for the Navy.

(4) A firm with some promising ideas in propeller manufacture took it on the chin in 1941. This spring it had no financial resources, could not proceed with a development and manufacturing program. But with a \$100,000 loan, Air Corps officers are confident that the outfit will produce \$500,000 worth of an "ace-in-the-hole" type of propeller in 1942.

• **Big Ones, Too**—Although these cases

cover working capital loans from \$20,000 to \$300,000, the amounts that may be guaranteed by the government are "limitless." Some huge loans, one of which is approximately \$250,000,000, are now in process of negotiation.

CONSUMER CREDIT SHRINKS

Government pressure and the scarcity of durable goods are steadily squeezing down the volume of consumer credit. Latest reports of the Department of Commerce show that consumer loan balances shrank 11% during the first six months of the year. In June alone, the total dropped 2.1%.

Commerce estimates, covering industrial banks, personal finance companies, and credit unions, put total consumer loans at \$929,400,000 at the end of June. This represents a drop of \$20,300,000 from the May figure.

During June, lenders extended \$126,100,000 worth of credit in new loans or renewals, but repayments of \$148,400,000 resulted in a net run-off. New business last month was about 25% less than June a year ago, when lenders did \$173,000,000 worth of new business.

Principal reason for the decline is the Federal Reserve limitation on installment plans. Also contributing to the slump is the shortage of durable consumers goods.

TELEGRAPH MERGER AGAIN

That hardy perennial, consolidation of the country's land telegraph lines, continues to attract a good deal of favorable attention. A subcommittee of the House's Interstate Commerce Committee this week opened hearings on the Senate-approved enabling legislation, and the remainder of the journey through Congress now promises to be relatively short.

The merger received the blessing of the Federal Communications Commission when James Lawrence Fly, chairman of FCC, told the subcommittee that a telegraph monopoly in this country is desirable, particularly in view of the financial condition of Postal which went through the wringer only a few years ago and already is in hock to the Reconstruction Finance Corp. for \$6,000,000.

Incidentally, Chairman Fly has an answer to those who say the merger won't go through because, to be successful, it would throw too many people out of work. Says Fly, in effect: "Now's just the time because those who lose their jobs can get work with the Signal Corps."

GROUP LIFE'S GAIN

In the first six months of this year, group insurance became the fastest

**I never expected to
see the day when
we'd get LIGHT
FROM OUR FLOORS**



PLANTS SPEED WAR PRODUCTION
... with floors that reflect light

New source of light increases illumination, speeds production, saves money and critical materials. Let us send you data on efficiency and economy of white cement floors.

FLOORS, like walls and ceilings, can aid the better lighting of a factory or any building.

Few people ever thought of this until a number of large aircraft plants installed white cement floors. Today these light-reflecting floors are speeding the flow of vital war machines. Today the same concerns are installing white cement floors in other new plants. What they are doing there can be applied to many other plants.

White floors, made of Atlas White portland cement, absorb less light and thus reflect and diffuse much more light than dark floors. In one factory they showed a 60% higher reflection factor than the gray cement floor in the same plant, and increased vertical illumination 20%.

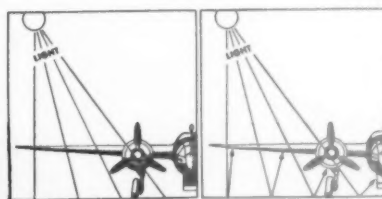


White cement floor in plant of Consolidated Aircraft Corp., somewhere in Texas
Designed by The Austin Co., engineers and builders

White cement floors reduce shadows in work areas along production line. They increase efficiency of employees ... guard their health, comfort and safety.

Non-critical materials are available for white cement floors today—sand, stone, Atlas White portland cement. To obtain the same light intensity over a darker floor would require more electrical equipment, which uses large quantities of aluminum, copper, rubber, steel, magnesium, lead, zinc, resins—all priority materials.

Savings in first cost of electrical equipment may more than pay for the extra cost of a white cement floor. In addition, there are large savings in operating costs. And maintenance of a white cement floor is simple—regular sweeping, occasional damp mopping, periodic scrubbing.



Gray concrete floors and other dark floors absorb light. A white cement floor (at right) reflects light into former shadow areas, makes seeing easier, reduces errors and accidents, increases production.

Light-reflecting floors, made with Atlas White portland cement, are valuable today, and will be tomorrow, for new floors or to retop old ones in any building. Write for details. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.

B-F-2

LIGHT-REFLECTING FLOORS
MADE WITH ATLAS WHITE CEMENT



THE MARKETS

As the government hits its stride in war financing, Wall Street once again is dusting off the old hedges against inflation. So far each thing examined has been surrounded by a fine collection of theoretical problems. Many unhappy traders have decided that a satisfactory hedge no longer exists.

• **Trying to Match the Rise**—Wall Street isn't badly worried about inflation yet, but the colossal government borrowing program makes it uncomfortable. Owners of fixed income securities always suffer when the price level takes a jump. They get the same dollar income, but their purchasing power goes down in direct proportion to the rise in prices. That's why cagey investors are anxious to put part of their holdings in assets whose rate of return will rise about as fast as the general price level.

Ten years ago, anyone in Wall Street would have told you that common stocks were the perfect hedge against inflation. The theory was that corporate earning power would keep pace with the rise in prices, so that the stockholder's dollar income would increase and his purchasing power would not suffer. Moreover, corporations could strengthen themselves greatly by paying off their bonds in depreciated currency, thus increasing the shareholders' equity. In a properly hedged portfolio, this gain would offset the loss on fixed income securities.

• **New Interpretations**—Today the problem is nowhere near as simple as that. Traders now argue bitterly about the hedge value of common stocks. Many are convinced that inflation would bring neither a boom in the stock market nor a gain in corporate revenues.

For the man who wants to hedge,

the country's ranking wet blanket is the Bureau of Internal Revenue. Under current proposals for excess profits taxes a corporation will get the benefit of only 10%—at the outside 20%—of anything it earns over the excess profits tax exemption. Since the exemption is based either on invested capital or on income during the 1936-1939 base period, this sets a pretty rigid limit on every company's net earnings and, hence, on dividends. From the hedger's viewpoint, this puts common stocks in about the same class as fixed income securities.

• **Hope for Tax Change**—Some traders hope that, after the war, the government will either drop excess profits taxation or give it a complete reworking. In that case, common stocks might get a chance to cash in on any increase of corporate earning power.

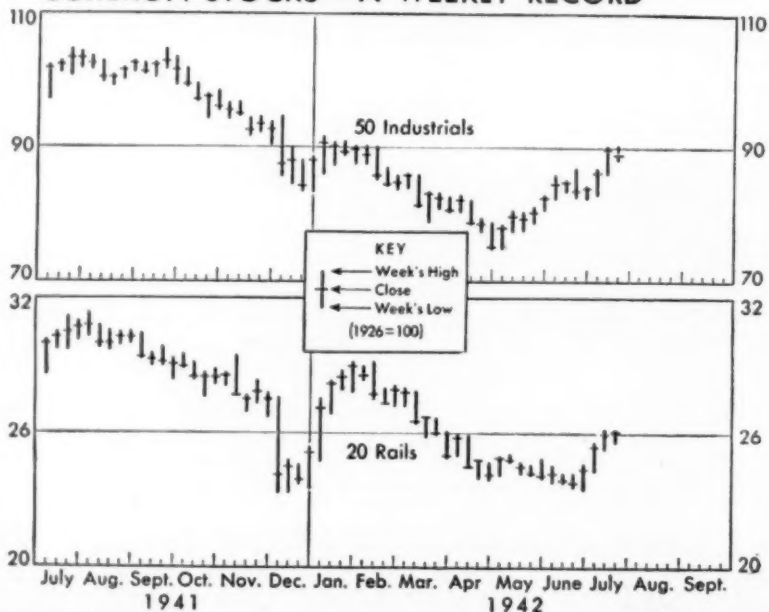
The trouble is that only tea leaf readers and similar necromancers have any positive opinions about what will happen to the excess profits tax. The investor who counts on eventual repeal is taking a chance. And taking a chance is what the hedger wants to avoid.

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial ...	89.2	89.8	83.7	103.3
Railroad	26.1	26.0	23.8	30.5
Utility	30.9	31.0	30.5	46.7
Bonds				
Industrial ...	108.8	108.4	107.6	105.0
Railroad	83.8	84.1	82.5	88.3
Utility	104.2	104.5	104.5	107.2
U. S. Govt....	110.8	110.8	110.8	112.0

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

COMMON STOCKS — A WEEKLY RECORD



growing branch of life underwriting. Half-year totals of new paid-for life insurance show group 103% over 1941, ordinary insurance only 3.6% ahead, and industrial 5.8% below last year.

Total value of new group policies for the six months was \$570,790,000. New ordinary amounted to \$2,742,963,000, new industrial to \$797,310,000. The total of new insurance came to \$4,111,063,000, which represents a gain of 8.9% over 1941.

Increasing employment in large plants is steadily swelling the number of workers who are eligible for group insurance. This accounts for much of the new business.

Reports of the Association of Life Insurance Presidents, covering 39 companies (writing about 81% of the country's life insurance) show that last month new life policies totaled \$647,394,000, a decrease of 0.1% under June, 1941. Group insurance accounted for \$161,061,000, a gain of 155.7% over last year. Industrial insurance, with \$129,863,000 worth of new business, was 4.3% under 1941, and ordinary life was down 20.7% at \$356,470,000.

COMMODITIES

An "Easy" Metal

Conservation of lead gets results. With aid of imports, supplies exceed war needs and rules on use may be relaxed.

Metals authorities believe that supplies of domestic and foreign lead available in this country at present are sufficient to encourage wide use of the metal in spite of heavy war demands. Of all the strategic metals, it has long been maintained that lead is among the very few in a relatively comfortable position.

Early in July, the Conservation and Substitution Branch of the War Production Board classified lead as one of the materials available in significant quantities for use as a substitute for less available materials. Both the government and representatives of the lead industry now agree that the supply situation has improved and consumers hope that something will be done to ease the controls imposed on those using the metal.

Aside from the conservation order for lead that became effective Apr. 1, restrictions on production of nonessentials (such as pleasure cars), building construction in nondefense areas, installation of telephones not required during the emergency, and numerous other items, have curbed the use.

• **Many Factors Involved**—Scarcity of

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copper limits production of cable, which, in turn, diminished the use of lead in lead-covered cable. Fewer automobiles call for fewer batteries, which brings about a drop in production of battery plates. That's how conservation works.

Harsh conservation orders are necessary on the really scarce materials, as in aluminum, magnesium, copper, and high-grade zinc. With that part of the program no one in the lead industry would offer any criticism. But, it is argued, whenever a supply situation in a strategic material becomes definitely easier, producers and consumers should receive some consideration.

• **More Antimony a Help**—There was good news for lead producers when, on July 11, the War Production Board amended its general preference order on antimony and modified the restrictions on use of this lead-alloying agent for certain specific uses because "supplies of antimony have become relatively more plentiful."

This action, it was explained in Washington, is expected to free larger supplies of antimony for use in bearing metals, relieving tin. The lead-antimony combination has been used in the production of certain bearing metals even when tin was plentiful.

• **Reduction Is Cumulative**—Direct and indirect conservation of lead consumption has cut deeply into the use of the metal in civilian products. The extent to which conservation will eventually curb consumption of lead, or any commodity for that matter, cannot be gaged for some time after the effective date of the regulations owing to an unavoidable time lag.

Requests for lead have been dropping off from month to month ever since April, and, though consumption is still large, shipments to consumers have declined from the peak by fully 25%. All surplus lead thus freed has been going into the government's stockpile.

• **Imports Make the Difference**—Domestic production of lead, it is known generally, has not been large enough to take care of current requirements. Output of refined primary lead from domestic ore in the United States in 1941 amounted to 470,517 tons, according to figures released last week by the Bureau of Mines, Department of the Interior. But, Mexican officials announced recently that the United States has signed an agreement to take all of Mexico's surplus production.

Normally Mexico produces around 225,000 tons of lead a year, almost as much as Australia. And lead has also been coming into the United States from other countries.

• **Rules May Be Eased**—At a meeting of lead producers and government officials held in Washington, the demand-supply situation was given a thorough airing. After the exchange of views, many asso-



Cyclone Fence guards the plants that are arming America

THE threat of spies, saboteurs and other Axis agents is real—right now! Scores have been arrested. Others may still be loose—as well as ordinary thieves and marauders who always endanger industrial plants. But thousands of America's great factories, now turning out war goods, have prepared to meet these risks with America's best-known fence—U·S·S Cyclone.

Cyclone Fence is almost impossible to climb, and any trouble-maker who might get inside finds it still harder to get out. Trouble-makers hate Cyclone—it's too tough for them—and it's on the job day and night. Cyclone is durable fence. Sturdy posts are set in con-

crete. Gates swing easily, but only at the control of your watchmen.

If you need fence, get in touch with us. We will help you choose the right fence—give you a free estimate. And, subject to priority restrictions, we'll do all we can to help you get the fence you need.

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	YORK ICE MACHINERY CORP. 4
	Agency—J. M. MATHER, INC.

ciated with the industry felt that the lead restrictions will be eased soon. The trade holds that need for the emergency pool in lead—15% of production—no longer exists.

Monthly statistics on production and stock of lead and other strategic materials are not available for publication. The code of wartime practices of the Office of Censorship has stopped publication of any statistical information other than officially released by a proper government department which would disclose the amounts of strategic or critical materials produced or in reserve.

● **The Trade Still Knows**—However, the statistical position of the major non-ferrous metals is known to those in the trade because the statistical compilations are still available to "members of the industry."

Plenty of Coffee

That is, there would be if we could actually import all that is made available by 30% boost in quota for coming crop year.

Coffee drinkers show a paper profit now that the Inter-American Coffee Board has approved an increase of 30% or 5,312,484 bags in American coffee quotas (the figure had originally been set at 17,618,494 bags) for the quota year beginning Oct. 1, and simultaneously permitted release of excess coffee now in store here.

● **Dividend Isn't Potable**—The breakfast dividend, however, was uncollectible, since Brazil, which is our dominant source of supply, has come nowhere near shipping the amount designated as its share during the current quota year. Hence a jump in quotas is strictly a paper token.

Shipping difficulties may keep the coffee squeeze on during next year also, but meanwhile a few thousand bags of coffee have accumulated in customs office custody here from countries which have filled and gone over their official quotas for the present period. The effect of the coffee board's action last week was to permit these coffees to enter consumption immediately, which would (1) relieve holders of a relatively small amount of storage charges between now and Oct. 1, and (2) toss a modest pinch of additional coffee into the pot ahead of time. The trade says the total will not run over 281,000 bags.

● **Extraordinary Demand**—We could use much more coffee than Brazil is shipping. The Army Quartermaster at Chicago is roasting enormous amounts. Question now is how either to get more here from Brazil or finance it down there to bolster Brazil's coffee-sensitive economy.

THE TRADING POST

Boomerang

In a recent address Archibald MacLeish, Director of the Office of Facts and Figures, took a swipe at some of the critics of the Administration. He conceded the abstract principle that the mark of a free man is his right to criticize his government but then he proceeded to draw a distinction between the benign critic who "sails into his government partly because he doesn't like it, but mostly because it's his" and the malign critic who "cusses it from the outside and with an outside feeling of animosity."

Mr. MacLeish denounced this latter type of criticism as dangerous because, he said, "its effect, if you get enough of it, can be to infect others with the notion that our government, their free men's government, isn't actually theirs, but is something outside them, something even, against them."

"The picture of Washington as another nation, almost a foreign power, fixed upon our shores to wage a kind of bureaucratic war upon our people, is a picture which would be fantastic if it were not so frequently presented."

"Who are these Congressmen and Senators who are set off in apparent distinction from the American people? They are the American people. They are the people's representatives in Congress, elected by the people, and acting in the people's behalf."

"You will forgive me if I say that the whole picture of Washington as a bureaucracy distinct from the American people strikes me as pretty cheap—contemptible and cheap."

Mr. MacLeish's indignation toward critics of the Administration of which he is a part is understandable. It never is so pleasant to take criticism as it is to dish it out. And he is quite correct in pointing out that it never is pleasant to be set apart from the people and held up as their natural enemy.

But it is a pity that some of Mr. MacLeish's associates in Washington never have been able to see that it is just as unfair and vicious to set up American business and business men as natural enemies of the American people.

If there has been an increase in the kind of criticism that Mr. MacLeish doesn't like, it might be worthwhile for the objects of that criticism to seek an explanation of it in their own attitudes and conduct. Perhaps they have just been getting some sort of boomerang effect from their criticism of others.

By way of illustration let me just paraphrase Mr. MacLeish's vigorous paragraphs as they might be written by an American business man.

"The picture of American business as another power, almost a foreign power, fixed upon our shores to wage a kind of economic war upon our people, is a picture which would be fantastic if it were not so frequently presented."

"Who are these industrialists and business men who are set off in apparent distinction from the American people? They are the American people. They are the people's representatives in the national economy, elected by the people through the free exercise of their purchasing power, and acting in the people's behalf to manage their economic processes."

"You will forgive me if I say that the whole picture of American business as a power distinct from the American people strikes me as pretty cheap—contemptible and cheap."

Yes, Mr. MacLeish, it may serve the purpose of some of our politicians to paint such a picture of American business, but it is, as a matter of fact, just about what you call it. I couldn't do any better myself.

More on Beef Outlook

The following letter from a Florida cattleman speaks for itself:

Just reread your BW cattle forecast for 1942 (BW—May 30 '42, p. 22). I traveled 600 miles on "Father's Day" to buy some yearlings and returned without finding any for sale. All 2- and 3-year olds have gone, also old cows and bulls. Veal is done. I look for meatless days soon.

Some big bugs are selling out entire herd for duration—expecting to restock at one-third of present prices. One large rancher offered \$300,000 ranch on 10-year payment plan. Another is selling \$90,000 herd, also Miami home, also Long Island home, also California home, also office buildings, also bank and brokerage houses in New York and Cincinnati and holdings in Isle of Malta. All he is keeping is his \$270,000 cash in bank. After liquidation he expects to live out life on 30,000-acre ranch with all worries well budgeted.

There are two schools of thought. The big bugs—I mean real big—60,000 head—are buying everything in sight and holding on. Others not so big are selling. I am wasting grass for the need of feeders.

Running True to Form

"In a time of war the nation is always of one mind, eager to hear something good of themselves, and ill of the enemy. At this time the task of newswriters is easy; they have nothing to do but to tell that the battle is expected, and afterward that a battle has been fought, in which we and our friends, whether conquering or conquered, did all, and our enemies did nothing."—Samuel Johnson, 1758. W.C.

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THE TREND

THE CONSUMER SPRINGS A SURPRISE

The National War Labor Board's new policy on wage increases, enunciated along with its 44¢-a-day award to Little Steel workers, has added fresh fuel to the inflation debate. It is clear that an increase in labor's income will widen that inflationary gap between the purchasing power loose in the market and the consumer goods available there.

But to ask how dangerously that increase will work to push prices up is to ask how large the gap really is. And that depends on what consumers choose to do with their money—in fancier language, on the “propensity to consume.” Of the total incomes that consumers receive, how much will go into some type of saving as “frozen money,” and how much will be “hot money,” bidding for the market's stringently limited supply of goods?

To help answer that question we are beginning to get some rather surprising information out of our experience at the new high-record national income levels of 1941 and 1942. It indicates that, for better or worse, the patterns of consumer saving and spending are turning out to be not quite in accordance with the economists' copybook rules.

Previous analyses had led to the conclusion that, as the incomes which consumers could dispose in the marketplace increased, their volume of savings increased even faster. Evidence was cited to show that less and less of each additional income increment would be spent. Statisticians went so far as to estimate the gain in savings to be expected at each higher income level.

What is surprising them now is that, all through 1941, the savings exceeded the volume expected for such a level of disposable consumer income. Even when all types of consumer goods were in ample supply—automobiles as well as oranges—and people were flocking to buy in fear of shortages, spending was less than anticipated. Less by as much as \$4,000,000,000 a year, according to one Department of Commerce estimate.

A second departure from theory came when our output of “hard goods”—automobiles, refrigerators, radios, and such products—was curtailed to make way for arms. The economists figured that about half of the several billion dollars of purchasing power then diverted would be spent by consumers to buy more of such things as suits, cosmetics, and vegetables. But, while people did buy more of these than usual, they bought only as much more as was warranted by the rise in their total incomes. Henderson's researchers have found scant evidence of a spree on buying power diverted from “hard goods.”

A final indication that consumer spending habits are exceedingly inelastic came this spring. Then, although the stores still had large inventories to sell, the buying of apparel and other “soft goods” fell off (BW—Jun.13'42, p13). In explanation, it was said that people had previ-

ously “overbought”—even though their spending had actually not come up to their buying power.

The implication of all this would seem to be that “the propensity to consume” at high income levels has been overestimated. That would mean, for the current war period, that the inflation gap is less of a problem than has been feared. There will still be more purchasing power than goods, but less of it should be considered “hot”, or dangerous to the price structure.

And, in all this, there appears an implicit warning to post-war planners. In considering the requisites for stable, full employment after the war, one school of thought recommends a “high consumption” economy (BW—Jan24'42,p68). Its theory is that, if the nation can be induced to spend a high proportion of its income on consumption goods, the volume of savings can be brought down into line with opportunities for investment. But, clearly, if recent experience can be taken as a guide, we could not have a high consumption economy without a radical redistribution of income which would give a greater share of it to that “lower third” which must spend a higher proportion of what it makes.

Such conclusions, however, must be taken as very tentative. The 1941 and 1942 volume of saving may have been unduly inflated—because people are uncertain of their postwar future and want to put away a nest-egg while they have the means; or, having had so little for so long, they may be paying off old debts fast and furiously; or, out of patriotic motives, they may be putting more into war bonds than they would ordinarily feel able to.

Conceivably, more current income might become “hot” later in the war as the savings against nest-eggs or old debts were satisfied, or if consumers grew impatient of shortages and inflation politics in a long conflict and rushed out to buy. Similarly, the removal of the present special incentives to saving might turn present misers into postwar spendthrifts.

Obviously, present policy cannot be entirely overturned simply because the “propensity to consume” has departed from expectations over the past two years. As suggested, further experience may justify the expectations. On the other hand, it might show that current spending—by consumers at last able to satisfy some long-standing wants, by free-handed young defense workers, or by hoarders against ultimate shortages—is even higher than should have been expected for these unexplored levels of national income. Attempts to plan public economic policy depend so critically on knowing what people do with their money and why that the whole subject will repay further study.

The Editors of Business Week

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